MCR 24, 24/28 MI, 30/35 MI, 34/39 MI

Wall-hung gas condensation boilers

English
08/06/06

Technical instructions

CE 0063

ISO 9001 depuis 1988

De Dietrich

www.dedietrich.com

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Declaration of compliance CE
Declaration of compliance A.R. 8/1/2004 - BE

Manufacturer	**DE DIETRICH THERMIQUE S.A.S.** **57 rue de la Gare** **F - 67580 MERTZWILLER** +33 3 88 80 27 00 +33 3 88 80 27 99
Issued by	See end of notice

We hereby certify that the series of appliances specified hereinafter is in compliance with the standard model described in the EC declaration of compliance, and that it is manufactured and marketed in compliance with the requirements and standards of the following European Directives:

Product type	Wall-hung gas boilers
Formats	MCR 24 MCR 24/28 MI MCR 30/35 MI MCR 34/39 MI
Standard applied	- 90/396/EEC Gas Appliance Directive Reference Standards : EN 437; EN 483; EN 625; EN 677 - 73/23/EEC Low Voltage Directive Reference Standards : EN 60.335.1 - 89/336/EEC Electromagnetic Compatibility Directive Generic standards : EN1000-6-3 ; EN 61000-6-1 - 92/42/EEC Efficiency Directive **** CE
Inspecting organisation	Gastec (Netherland)
Values: Standards EN 297 A3	NOx < 114 (mg/kWh) 65 ppm; CO < 65 (mg/kWh) 65 ppm
Date	22/06/04

Signature	Technical Director Mr Bertrand SCHAFF

Symbols used

Caution danger
Risk of injury and damage to equipment. Attention must be paid to the warnings on safety of persons and equipment

Important information
Information must be kept in mind to maintain comfort

Reference
Refer to another manual or other pages in this instruction manual

DHW:Domestic hot water

Important recommendations

MCR boilers must be installed :

- in a frost-free room;
- as close as possible to draw-off points in order to minimise energy losses through the pipes.

Installation must be carried out in accordance with the prevailing regulations, the codes of practice and the recommendations in these instructions.

Keep this document close to the place where the tank is installed.

The first start-up is to be performed by your installation engineer.

Only original spare parts must be used.

Any intervention on the appliance and heating equipment must be carried out by a qualified technician. Please confirm to the user of the installation that you have carried out a leak tightness check on the gas circuit.

For the application of article 25 of the modified decree dated 02/08/1977 and of article 1 of the modifed decree dated 05/02/1999, the installation engineer must be in possession of the certificates of compliance approved by the Ministries in charge of construction and gas safety.

Any work on the gas valve unit is authorised only if carried out by a qualified professional.

For Belgium: The operations required to switch from one gas to another must be carried out by a SERV'elite technician.

Prior to commissioning, compare the factory settings of the appliance with the local power supply conditions. If the settings have to be modified, this must be carried out by a qualified professional.

Condensation boilers require a flue gas evacuation system or a fresh air inlet specially adapted to the method of operation. Its execution depends on the place of installation and the building.

Compliance with a minimum distance between the flue gas evacuation system in forced flue mode or the boiler with combustible substances is not necessary (For Belgium: Comply with the NBN B61-002 standard). At nominal output, the temperature of the components does not exceed 85 °C.

The manufacturer is not liable for any improper use of the appliance or failure to maintain or install the unit correctly (the user shall take care to ensure that the system is installed by a qualified fitter).

Work on electrical equipment must be carried out by a qualified professional in compliance with the prevailing legislation.

We shall not accept any responsibility for any damage and disturbance arising from not following these instructions.

Service the appliance regularly to ensure that it operates correctly.

Belgium

The installation and maintenance of the boiler must be done by a qualified professional in compliance with the prevailing local and national regulations.

The boiler is preset in the factory to operate on natural gas. It is formally prohibited to interfere with the gas block.

Other countries

The installation and maintenance of the boiler must be done by a qualified professional in compliance with the prevailing local and national regulations.

Description

MCR boilers are gas condensing boilers; they handle :

- **central heating using radiators or underfloor heating (MCR 24);**
- **central heating and instant domestic hot water production (MCR ... MI).**

The boilers operate on natural gas or propane. They are factory set for natural gas H.

For use with natural gas L or propane, it is necessary to adjust the boiler.

If converting to propane :

See "Adapting to another gas"

The MCR 24 boiler can be connected to a 80 or 130 litre tank to produce domestic hot water.

For Belgium: Any intervention on the gas valve unit is strictly forbidden.

Boilers	MCR 24	MCR 24/28 MI	MCR 30/35 MI	MCR 34/39 MI*
No. CE	PIN 0063BQ3009			
Type	B_{23P}, B_{33}, $C_{13(x)}$, $C_{33(x)}$, $C_{43(x)}$, C_{53}, $C_{63(x)}$**, $C_{83(x)}$			
Flue gas evacuation	Forced flue			
Ignition	Automatic			
Gas	Natural gas / Propane			

* Italy: Not proposed

** Except Belgium

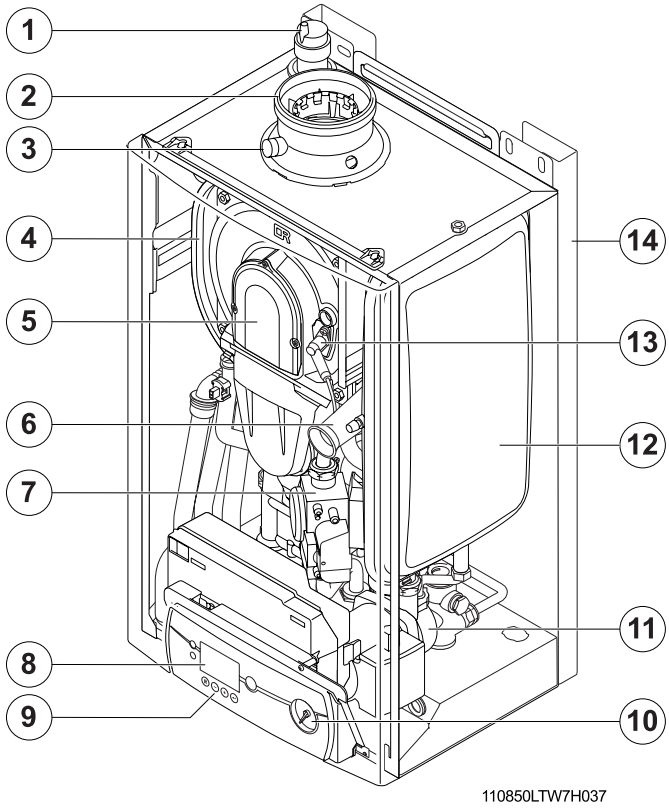
1 Package list

- Boiler package with mounting frame. Can be used to make the water, gas and water evacuation connections: Safety valve, disconnector, condensates run-off.
- Accessories package, dependent on the type and length of the forced flue

2 Certifications

User country	FR		ES, GB, GR, IE, IT, PT		BE	PL	
Category	II_{2Esi3P}		II_{2H3P}		$I_{2E(S)B}$, I_{3P}	$II_{2ELwLs3P}$	
Gas	GN H	Propane	GN H	Propane	G20/25	E (G20)	Ls
	GN L				G31	Lw	G31
Supply pressure	20 mbar	37 mbar	20 mbar	29 mbar	20/25 mbar	20 mbar	13 mbar
	25 mbar				37 mbar	20 mbar	36 mbar

User country	CZ		HU		RO, SI
Category	II_{2H3P}		II_{2H3P}		II_{2H3P}
Gas	GN H	Propane	GN H	Propane	G20
					G31
Supply pressure	20 mbar	50/29 mbar	25 mbar	28-30/50 mbar	20 mbar
		30/37/50 mbar			30 mbar



1.	Automatic bleed valve
2.	Smoke nozzle
3.	Outlet for measuring combustion hygiene
4.	Heat exchanger
5.	Air/gaz canal
6.	Fan air inlet
7.	Gas block
8.	Display
9.	Control panel
10.	Pressure gauge
11.	Circulating pump
12.	Expansion chamber (only for MCR 24,MCR24/28 MI,MCR 30/35 MI)
13.	Ignition/ionisation electrode
14.	Stand off mounting frame (optional)

i Expansion chamber (optional): only for MCR 34/39 MI

4 Technical data

Boilers		MCR 24	MCR 24/28MI	MCR 30/35MI	MCR 34/39MI
Nominal useful output 40/30 (Heating mode) (min./max)	kW	6.3/25	6.3/25	6.6/31.3	6.8/35.5
Nominal useful output 80/60 (min./max)	kW	5.5/23.6	5.5/23.6	5.7/29.5	5.9/33.3
Nominal useful output (DHW mode) (min./max)	kW	-	27.4	34.3	38.2
Nominal input power (heating and DHW modes)	kW	24/24	24/28	30/35	34/39
Minimum useful output 40/30 (Heating mode)	kW	6.3	6.3	6.6	6.8
Minimum input power (heating and DHW modes)	kW	5.8	5.8	6.1	6.3
Gas flow rate à Pn (à 15°C - 1013 mbar): Natural gas H Natural gas L Propane	kW m^3/h m^3/h Kg/h	24 2.4 2.8 1.9	24 2.4 2.8 1.9	35 3.5 4.1 2.7	39 3.9 4.5 3.0
PCI efficiency, Load and water temperature efficiency:					
100% Nominal power, Average temperature: 70 °C	%	98.3	98.3	98.2	98
100% Nominal power, Return temperature: 30 °C	%	104.4	104.4	104.4	104.4
30% Nominal power, Return temperature: 30 °C	%	108.7	108.7	109.7	110.5
Maximum temperature (Safety thermostat cut-off)	°C	110	110	110	110
Losses when off (ΔT = 30 °C)	W	30	30	29	28
Losses through the outer casing	%	1.1	1.1	0.9	0.5
Water capacity	l	1.7	1.8	2	2.2
Weight without water, without mounting frame, without cladding	kg	29	30.5	32	31.5
Specifications of the heating circuit					
Nominal water flow (ΔT = 20 K)	l/h	1.03	1.03	1.29	1.47
Rated net head (ΔT = 20 K)	mbar	>200	>200	>200	>200
Flow temperature	°C	75	75	75	75
Maximum pressure	bar	3	3	3	3
Expansion chamber	l	8	8	8	-
Initial pressure of the expansion tank	bar	1	1	1	1
Minimum operating pressure	bar	0.8	0.8	0.8	0.8
Domestic hot water specifications					
Instruction set outlet temperature	°C	55	55	55	55
Specific hot water flow (ΔT = 30 K)	l/min	-	14	16	19
Nominal max cold water pressure	bar	8	8	8	8
Minimum pressure (11 l/min)	bar	-	1.4	0.4	0.4
Combustion products circuit					
Connecting	diameter (mm)	60/100	60/100	60/100	60/100
Mass flue gas flow rate (min./max)	Kg/h	10/40	10/47	10/59	10/62
Flue gas temperature 80/60	°C	78	78	74	71.5
Pressure available at the flue gas nozzle	Pa	50	100	100	140
Condensation water pH 50/30	-	1-7	1-7	1-7	1-7
Electrical specifications					
Power supply voltage (50 Hz)	V	230	230	230	230
Power consumption	W	115	115	150	180
Electrical output circulating pump	W	90	90	125	135
Auxiliary electrical output (Nominal power, ex circulating pump)	W	25	25	25	45
Insulation class		IPX4D	IPX4D	IPX4D	IPX4D

1 mbar = 100 Pa - 1 daPa ~ 1 mm H_2O

Cold water temperature: 10 °C; Domestic hot water temperature: 85 °C

Main dimensions

1 Package list (Standard delivery)

- **France + Other countries**

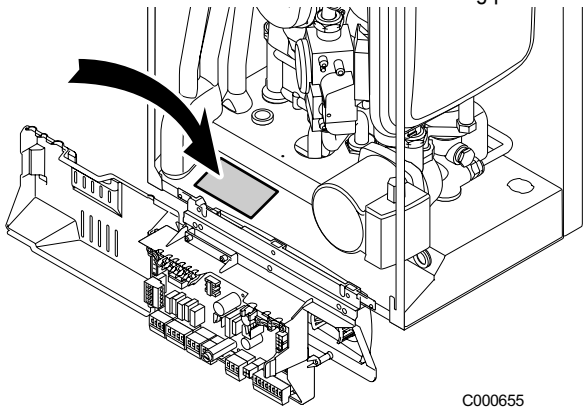
Boilers	Boiler package	Forced flue package	
		Horizontal (diameter 60/100)	Vertical (diameter 80/125)
MCR 24	HG1	DY847	CX50
MCR 24/28MI	HG2	DY847	CX50
MCR 30/35MI	HG3	DY847	CX50
MCR 34/39MI	HG4	DY847	CX50

- **Belgium**

Boilers	Boiler package	Forced flue package	
		Horizontal (diameter 60/100)	Vertical (diameter 80/125)
MCR 24 BE	HG5	DY847	CX50
MCR 24/28MI BE	HG6	DY847	CX50
MCR 30/35MI BE	HG7	DY847	CX50
MCR 34/39MI BE	HG8	DY847	CX50

2 Serial number

The serial number can be found on the boiler's rating plate.



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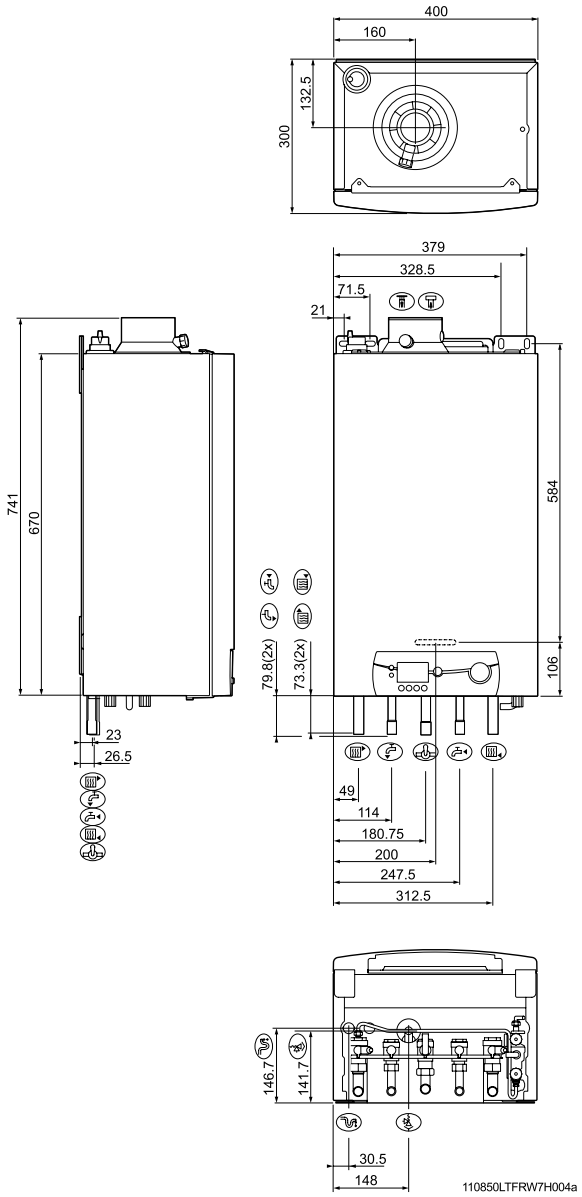
3 Mounting frame

A stand off frame is an option for easy and fast upward piping behind the boiler; a pipework kit is an option for a upward piping in combination with the stand off frame.

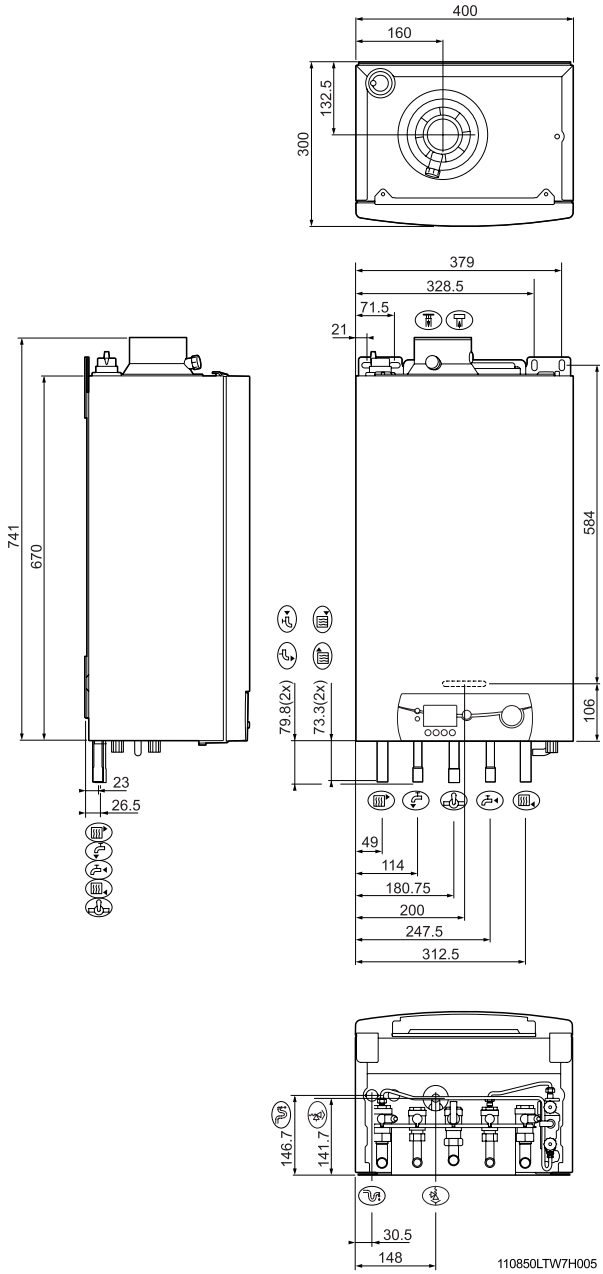
4 Boiler installed

MCR 24



France + Other countries	Belgium + Germany + Poland
Return connection (Inside diameter 18 mm)	Return connection (External diameter 22 mm)
Flow connection (Inside diameter 18 mm)	Flow connection (External diameter 22 mm)
Gas connection (Inside diameter 18 mm)	Gas connection (External diameter 22 mm)
Combustion air inlet (diameter 100)	Combustion air inlet (diameter 100)
Flue gas discharge duct (diameter 60)	Flue gas discharge duct (diameter 60)
Return storage tank (Inside diameter 16 mm)	Return storage tank (External diameter 15 mm)
Outlet storage tank (Inside diameter 16 mm)	Outlet storage tank (External diameter 15 mm)
Condensates evacuation pipe (3/4")	Condensates evacuation pipe (3/4")
Safety valve (diameter 15)	Safety valve (diameter 15)

MCR 24/28MI, 30/35MI, 34/39MI



France + Other countries	Belgium + Germany + Poland
Return connection (Inside diameter 18 mm)	Return connection (External diameter 22 mm)
Flow connection (Inside diameter 18 mm)	Flow connection (External diameter 22 mm)
Gas connection (Inside diameter 18 mm)	Gas connection (External diameter 22 mm)
Combustion air inlet (Ø 100 mm)	Combustion air inlet (Ø 100 mm)
Flue gas discharge duct (Ø 60 mm)	Flue gas discharge duct (Ø 60 mm)
Return storage tank (Inside diameter 16 mm)	Return storage tank (External diameter 15 mm)
Outlet storage tank (Inside diameter 16 mm)	Outlet storage tank (External diameter 15 mm)
Condensates evacuation pipe (3/4")	Condensates evacuation pipe (3/4")
Safety valve (Ø 15 mm)	Safety valve (Ø 15 mm)

MCR boilers are equipped with a control panel with electronic regulation including security and flame surveillance by ionisation probe.

The boiler is not sensitive to phase reversal. The normal maximum absorbed power is between 115 W and 130 W. The boiler is entirely pre-wired. All external connections can be made with terminal block X9.

Boiler MCR power can be regulated in several ways:

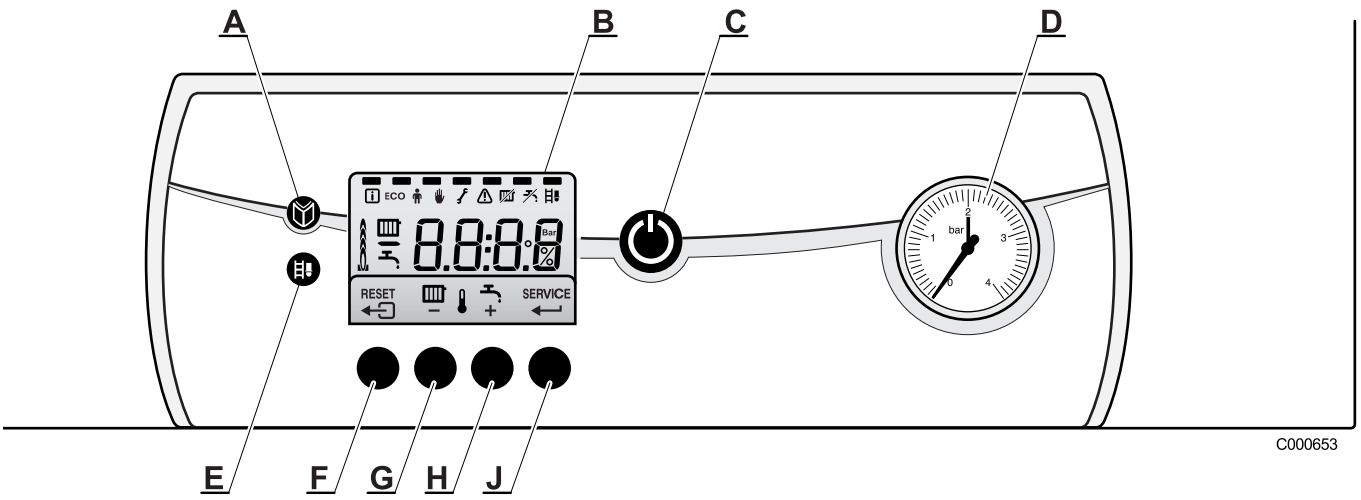
Dry contact room thermostat (Commutation without power): The boilers internal control will modulate the output to achieve the flow temperature set point of the boiler. The contact is on the X9 terminal strip (low voltage only).

i All connections on terminal block X1,X2,X4,X5,X6,X7 are in 230 V.
All connections on terminal block X9 are low voltage only.

The MCR is a modular boiler whose temperature can be regulated using one of the following solutions:

- Regulation as a function of room temperature:
  - Easymatic,Easyradio communicating room regulation + Interface PCB (AD 221)
- Regulation: Outside sensor alone
- Regulation as a function of the outside temperature + Outside sensor alone:
  - Easymatic,Easyradio + Outside sensor + Interface PCB (AD 221)
- Regulation as a function of the outside temperature with a 3-channel valve circuit:
  - Easymatic or Easyradio + Outside sensor + Interface PCB (AD 222)

The MCR boiler is fitted with an electronic temperature regulator with outlet and return temperature sensors. The outlet temperature can be set between 20 and 85. The boiler increases or lowers power as a function of instructions.



The control panel of the MCR boiler has 6 function keys, an on/off switch and a screen. The function keys are used to read or modify parameters and temperatures.

A	**Menu key**
B	**Display**
C	**Main ON/OFF switch**
D	**Pressure gauge**
E	**Sweep key**
F	**"Escape" or "Reset" key**
G	**Heating temperature adjustment key or -**
H	**DHW temperature adjustment key or +**
J	**Maintenance key or enter**

The display includes 4 positions and several symbols which indicate the operating status of the control panel and any disturbances. Figures, points and/or letters may be displayed.

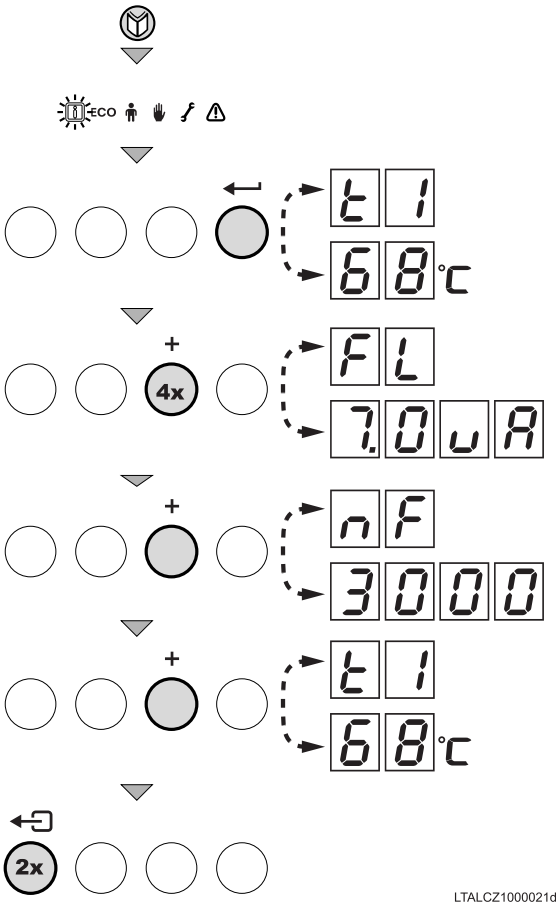
The symbols located above the function keys indicate their current function.

Pressing on any key will display the current status of the boiler and the current command code. If there is a malfunction, the corresponding code continues to be displayed.

2 Parameter display

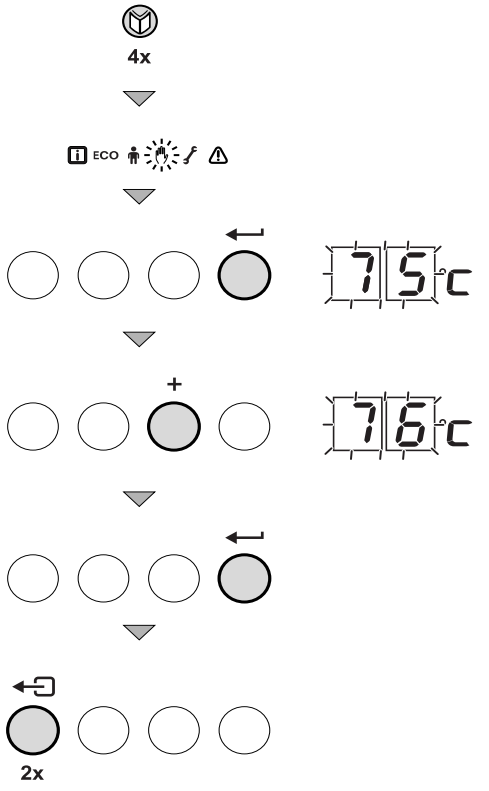
The following parameters can be displayed in the information menu ⓘ:

- **t1** = Flow temperature (°C)
- **t2** = Return temperature (°C)
- **t3** = Tank sensor (°C)
- **t4** = Outside temperature (°C)
- **FL** = Ionisation current (µA)
- **nF** = Fan speed (rpm)



- Press the key. The symbol ⓘ flashes. To access the parameters, press key ⟵.
- Press the **+** key successively to scroll down the various parameters.

2.1 Setting the manual mode (✋)

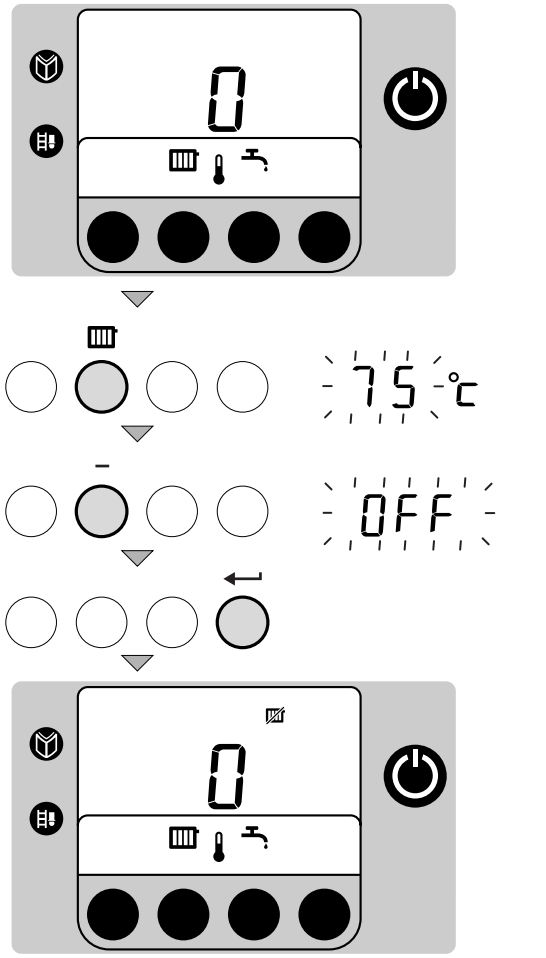


- Press key several times until the symbol ✋ flashes on the menu bar.
- Press the ⟵ key. The minimum outlet temperature **P1** or the text **Auto** is displayed if an outside temperature sensor is installed.
- Press the **+** key to increase the outlet temperture manually.
- To confirm, press the ⟵ key.

The installation is in manual mode.

- Press key ⟵ 1 time to deactivate the manual mode.
- Press key ⟵ 1 time to return to the current operating mode.

2.2 Switching off the central heating (In summer mode)



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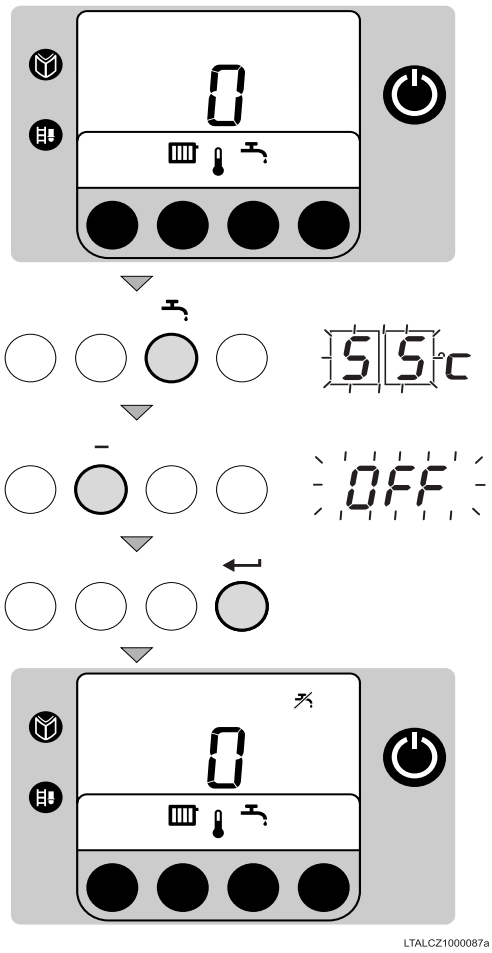
- Starting from the current operating status, press key .
- The symbol and the current temperature are displayed.
- Press the **-** key until the **OFF** symbol is displayed.
- Press the ⟵ key to modify the setting.
- The symbol appears.

i production of domestic hot water: activated.

2.3 Switching off the domestic hot water( )



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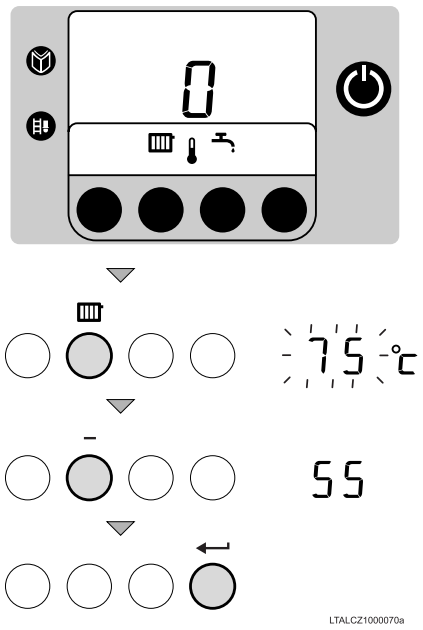
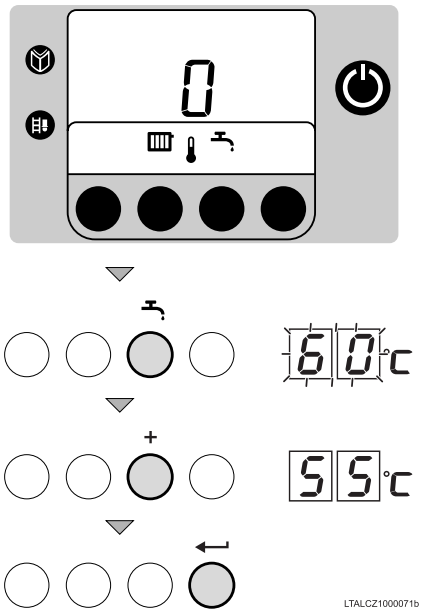
- Starting from the current operating status, press key .
- The symbol and the current temperature are displayed.
- Press the **-** key until the **OFF** symbol is displayed.
- Press the ⟵ key to modify the setting.
- The symbol appears.

2.4 Modifying the water outlet temperature in the heating installation



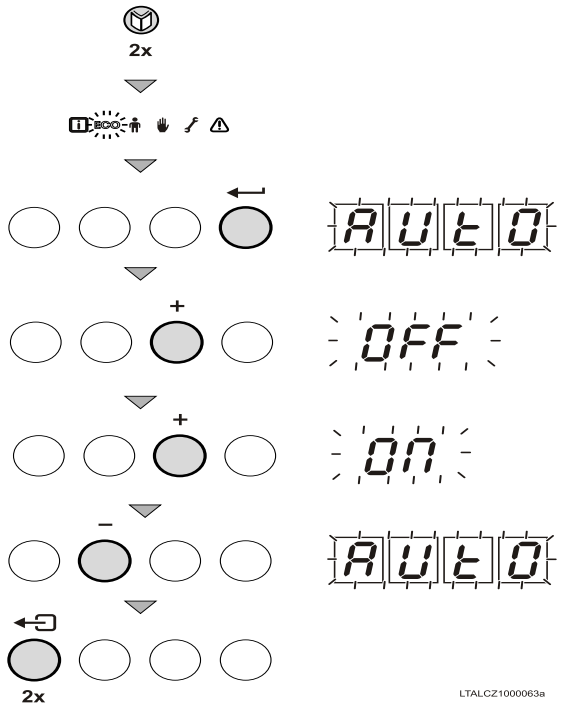
- Starting from the current operating status, press key .
- The symbol and the current temperature are displayed.
- Press the **+** or **-** key to modify the value.
- To confirm, press the ⟵ key.

2.5 Setting the domestic hot water temperature



- Starting from the current operating status, press key .
- The symbol and the current temperature are displayed.
- Press the **+** or **-** key to modify the value.
- To confirm, press the ⟵ key.

2.6 Modifying the comfort setting (ECO)



The user can consult or modify the following 3 settings:

- **ON** = Activation of the energy-saving setting.
- **OFF** = Activation of the comfort setting
- **AUTO** = Setting dependent on the control unit (=Factory setting).
- Press the key. The symbol flashes.
- Press the key a second time. The symbol **ECO** flashes.
- To confirm, press the ⟵ key.
- The current operating status is shown on the display: **ECO**.
- Press the key to return to the **ECO** menu or press the **+** key to modify the status.
- To confirm, press the ⟵ key.
- Press key 1 time to return to the current operating mode.

In **ECO** mode: ON
If the **ECO** mode is set to ON, when the boiler is used with an external hot water tank, the water is not heated. If the hot water tank is empty, the tap water will therefore be cold.

In **Auto** mode
If the setting is on **Auto** and the control unit is fitted with a **ECO** function, the appliance adapts to the control unit setting.
For example: The **ECO** setting is tripped at night during reduced temperature operation.

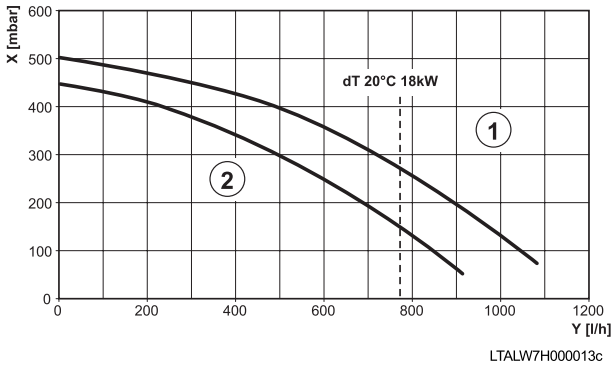
Hydraulic specifications

1 Boiler pump

Depending on the flow, the following diagrams represent:: manometric heights available at boiler outlet.

For a fixed flow, the manometric height available at the boiler outlet is obtained by taking the difference between the manometric height of the circulator pump and the loss of load in the boiler.

- MCR 24, MCR 24/28 MI



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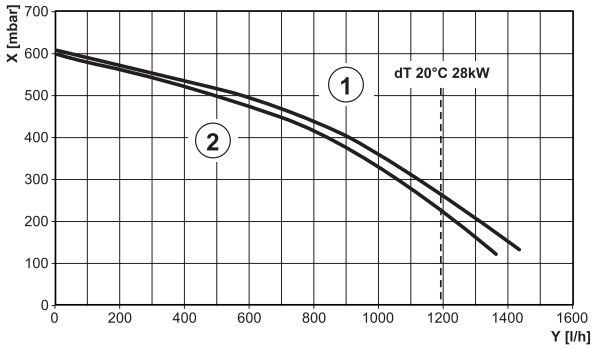
- MCR 34/39 MI



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X: Rated net head

Y: Flow rate

①: High manometric pump

②: Low pressure pump

2 Expansion chamber

The boiler is fitted as standard with an 8-litre expansion tank (except MCR34/39 MI) (Initial pressure of the expansion tank 1 bar). The total water volume is determined according to the static height of the installation and for an average water temperature of 80°C (Outlet : 80; Return : 60).

Pressure: Safety valve		**3**	
Initial pressure of the expansion tank (bar)	0.5	1	1.5
Total water volume (litres)	**Volume of the expansion vessel (litres)**		
100	4.8	8	13.3
125	6	10	16.6
150	7.2	12	20
175	8.4	14	23.3
200	9.6	16	26.6
250	12	20	33.3
300	14.4	24	39.9
To obtain other volumes, multiply the volume of the system by one of the factors:	0.048	0.080	0.133

If the water volume is greater than 100 litres or the static height of the system exceeds 5 metres, an additional expansion tank must be fitted.

Residential buildings for France

Statutory terms and conditions of installation and maintenance

The installation and maintenance of the appliance must be carried out by a qualified professional in compliance with the statutory texts of the codes of conduct in force, particularly :

- Order of 2 August 1977

Technical and safety rules applicable to combustible gas and liquefied hydrocarbon installations situated inside residential buildings and their annexes.

- NF P 45-204 standards

Gas installation, (formerly DTU 61-1, gas installations: April 1982, addendum no 1: July 1984).

- Local Sanitary Regulations

For appliances connected to the electricity network:

- NF C 15-100 standards Low voltage electrical installation - Rules.

Establishments open to the public (France)

Statutory terms and conditions of installation

The installation and maintenance of the appliance must be carried out in compliance with the statutory texts and rules of the codes of conduct in force, particularly:

- Safety regulations against fire and panic in establishments open to the public:

a. General regulations

For all appliances:

- Articles GZ - Installations operating on combustible gases and liquefied hydrocarbons

Then, depending on use:

- Articles CH-Heating, ventilation, refrigeration, air conditioning and production of steam and domestic hot water

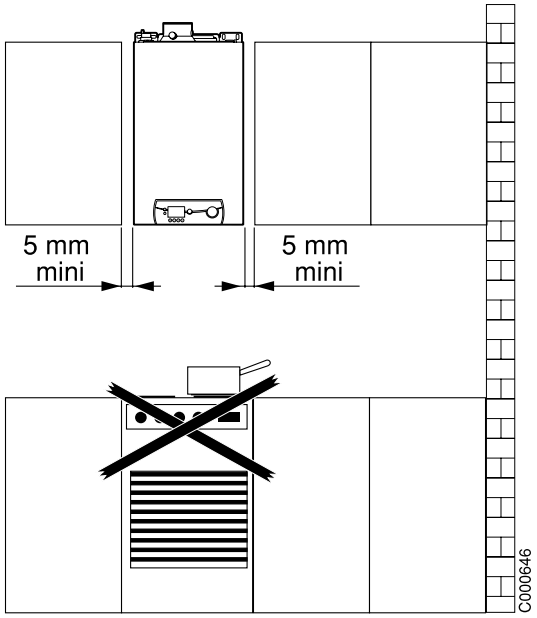
b. Instructions specific to each type of establishment open to the public (hospitals, stores, etc.)

Belgium

The boiler installation and gas connection must be carried out by a qualified professional in compliance with the NBN D 51.003, NBN D 30.003, NBN B 61.001, NBN B 61.002 and NBN D 51.006 standards. An ARGB approved stop valve must be fitted in the pipe leading to and close to the boiler.

Electrical connections must comply with the instructions in the general regulations on electrical installations (RGIE).

Belgium:the cross-section of the aeration vents, which are compulsory in the room in which the boiler is installed, must comply with the NBN D 51-003 standard.



The boiler must not be positioned above a heat source or a cooking appliance

- The boiler must be fixed to a solid surface, capable of bearing the weight of the appliance and other equipment when full of water.
- To enable removal and replacement of the cladding, a space of 5 mm is sufficient on either side of the boiler.
- The IPX4D protection index authorises installation in bathrooms, except for protection volumes 1 and 2 however.

Comply with current regulations.

If using thermostatic valves, it is not necessary to fit them to every radiator.

Never fit radiators in the room in which the room temperature thermostat is installed with thermostatic valves.

Certificate of compliance

For the application of article 25 of the modified decree dated 02/08/1977 and of article 1 of the modifed decree dated 05/02/1999, the installation engineer must be in possession of the certificates of compliance approved by the Ministries in charge of construction and gas safety:

- Different forms (forms 1, 2 or 3) for a new gas installation,
- "Model 4" in particular after replacing a furnace with a new one.

In order to avoid damage to the boilers, it is necessary to prevent the contamination of combustion air by chlorine and/or fluoride compounds, which are particularly corrosive. These compounds are present, for example, in aerosol sprays, paints, solvents, cleaning products, washing products, detergents, glues, snow clearing salts, etc.

Therefore:

- Do not suck in air evacuated from premises using such products: hairdressing salons, dry cleaners, industrial premises (solvents), premises containing refrigeration systems (risk of refrigerant leakage), etc.

- Do not stock such products close to the boilers.

If the boiler and/or peripheral equipment are corroded by such chloride or fluoride compounds, the contractual guarantee cannot be applied.

Fill the heating system only with non-treated drinking water (pH between 6 and 9). If you require more information on specific subjects, do not hesitate to contact our technical department.

If used correctly water treatment can improve the boilers efficiency and increase the anticipated life expectancy of the boiler.

As most systems contain a variety of metals, it is considered good practice to provide some frome of water treatment in order to prevent or reduce the following (metallic corrosion, formation of scale and sludge, microbiological contamination, chemical changes in the untreated system water.

Suitable chemicals and their use should be discussed with a specialist water treatment company prio to carrying out any work (environmantal aspects, health aspects). Specification, age and state of the installation, as well as manufacturer recommendations must be considered. Think of cleaning old water installations to remove any corrosive residue, especially black iron oxide sludge.

The boiler must not operate if chemical products are used for cleaning.

The exchanger will have to be descaled, if need be, in order to maintain optimum performance.

It is especially important to check the concentration of inhibitors after installing them, make the necessary modifications to the installation, inject water in the installation and perform all maintenance operations conform to these instructions.

To know the suitable dosage as well as which inhibitors to use with your boiler and to acquire further information on water processing or cleaning of the installation contact the technical service directly.

Minimum water flow

The MCR boiler is equipped with a system protection against low flows that depends on temperature reading. By reducing boiler power as soon as there is a risk of insufficient flow, the boiler can continue operating. However, if the temperature difference between the out and return heating is greater than 45 °C or if the rise in heating outlet temperature is greater than 1 °C/second, the boiler cuts for 10 minutes before authorizing start-up again. If there is no water in the boiler or if the pump is not operating, the boiler shuts itself down (code **E7**) and needs to be restarted manually.

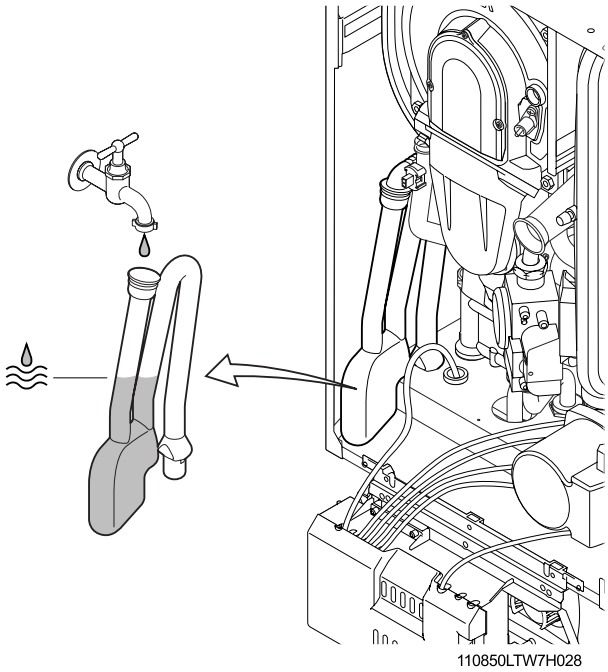
1.1 Fitting the mounting frame

Refer to the assembly instructions supplied with the mounting frame package.

1.2 Positioning the boiler

See "Installation instructions"

1.3 Filling the siphon

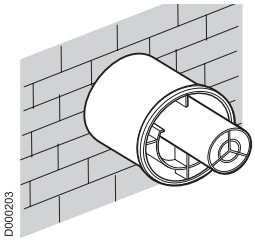


Operation while the condensation water siphon is empty may damage the boiler. There is a danger that combustion products will overflow into the waste water discharge network.

To do this, fill the siphon with water via the combustion products discharge conduit until it overflows.

1.4 Stove fitting connections

- Horizontal flue gas conduits must be installed with a zero gradient. The run-off of condensates to the boiler is handled by the eccentricity of the horizontal terminal. The terminal must be oriented according to the figure below.



i Use the mounting template provided with the boiler to position holes to be drilled for the outlet of the horizontal forced flue.

The cross section of the ventilation inlet in the premises for type B_{23} connections (i.e. intake of combustive air into the premises) must be in compliance with the prevailing standard.

- Type C appliances can only be installed with the systems mentioned in these technical instructions (particularly concentric pipes, terminal connection parts).
- As connections of type B_{23} chimney conduits and type C_{53} conduits are pressurised, they must be either installed outside or in a ventilated brick sheath.

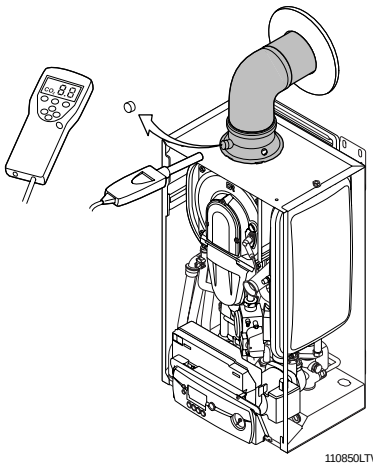
Ventilation must be ensured :

- by an opening located in the lower section, taking the air either from the common ventilated areas or directly from outside, and
- by an opening in the upper section connected directly with the outside.

The minimum cross section of the air vent and the openings to be provided must be 100 cm^2 (clear cross section).

The parts of this sheath which can be dismantled must allow for inspection of the flue gas conduit along its entire length.

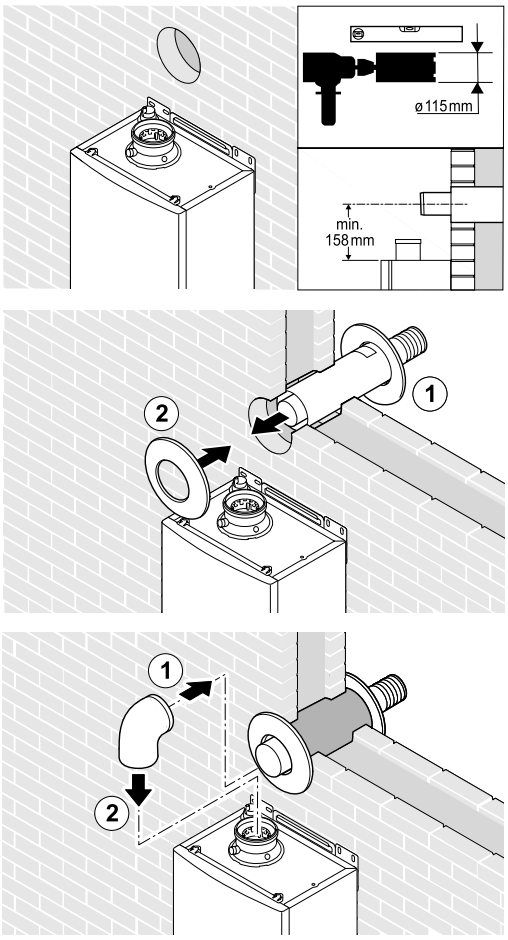
Belgium: The boiler installation and gas connection must be carried out by a qualified professional in compliance with the NBN D 51.003, NBN D 30.003, NBN B 61.001, NBN B 61.002 and NBN D 51.006 standards.



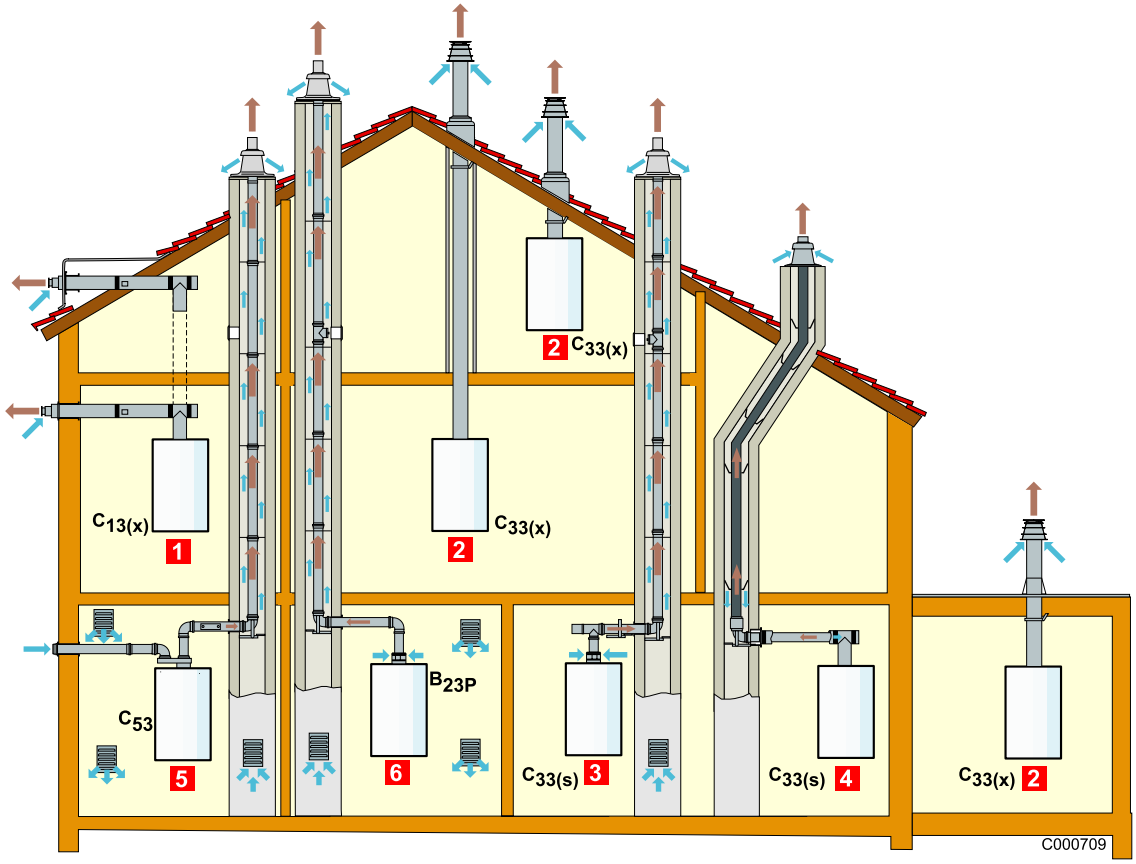
Comply with the installation instructions and the information on the authorised lengths of the flue gas pipes.

- ▸Mount the flue gas pipe or the fresh air/flue gas evacuation system in compliance with the assembly instructions.
- ▸Check the tightness of the flue gas pipe.
- Static test overpressure : 1000 Pa
- Maximum leak rate : 50 l/hm2 depending on the internal surface of the flue gas pipe
- A diameter 60 = 0.18 m^2/m, A diameter 80 = 0.25 m^2/m,
- A diameter 100 = 0.31 m^2/m, A diameter 130 = 0.40 m^2/m.

▸On concentric (forced flue) flue gas evacuation systems, the CO2 content in the annular space on the measurement pipe can also be checked. The installation of the flue gas evacuation is considered leak tight if the CO2 content measured is less than 0.2%.



1.5 Classification



(s) Valid only for Belgium

(x) For Germany only

1	**Homologation $C_{13(x)}$** : Air/flue gas connection by means of concentric pipes to a horizontal terminal (so-called forced flue)
2	**Homologation $C_{33(x)}$** : Air/flue gas connection by means of concentric pipes to a vertical terminal (roof outlet) or
3	Air/flue gas connection by concentric pipes in the boiler room and single pipes in the chimney (combustive air in counter current in the chimney) or
4	Air/flue gas connection by concentric pipes in the boiler room and single "flex" in the chimney (combustive air in counter current in the chimney) **For Belgium:** **Homologation $C_{33(s)}$** : Only factory components are authorised for connecting the boiler and the terminal. The clear section must comply with the standard. The chimney must be swept before the installation of the evacuation conduit.
5	**Homologation C_{53}** : Air and flue gas connection separated by means of a bi-flow adapter and single pipes (combustive air taken from outside)
6	**Homologation B_{23P}** : Chimney connection (combustive air taken from the boiler room)
7	**Homologation B_{23P}** : Cascade installation

1.6 Lengths of the air/flue gas pipes

Type of air/flue gas connection		Diameter	Maximum length of the connection pipes (metres)			
			MCR 24	MCR 24/28 MI	MCR 30/35 MI	MCR 34/39 MI
Concentric pipes connected to a horizontal terminal ((Alu))	$C_{13(x)}$	60/100 mm	6	7	4	6
		80/125 mm	31	32	22	29
Concentric pipes connected to a vertical terminal ((Alu))	$C_{33(x)}$	60/100 mm	6	7	4	6
		80/125 mm	31	32	22	29
Concentric pipes in the boiler room Single pipes in the chimney (combustive air in counter current) ((Alu))	$C_{33(s)}$	60/100 mm 80 mm (rigid)	18	23.5	10	12
	$C_{33(x)}$	80/125 mm 80 mm (rigid)	-	-	24	25.5
Concentric pipes in the boiler room "Flex" pipes in the chimney (combustive air in counter current) (PPS)	$C_{33(s)}$	60/100 mm 80 mm (flexible)	15.5	19	7	9
	$C_{33(x)}$	80/125 mm 80 mm (flexible)	-	-	18	20
Bi-flow adapter + Separate single air/flue gas pipes (combustive air taken from outside) ((Alu))	C_{53}	60/100 mm 2x80 mm	44	48	30	32.5
Chimney (rigid or flexible) (combustive air taken in the premises) (PPS)	B_{23P}	80 mm (rigid)	33	37	19	22
		80 mm (flexible)	23	27	22.5	24.5

(s) Valid only for Belgium

(x) For Germany only

Lmax is measured by adding the lengths of the air/flue gas pipes and the equivalent lengths of the other elements.

Length of the reductions (Alu) (m)	Ø 60/100	Ø 60	Ø 80/125	Ø 80
Elbow87°	**1.1**	**1.1**	**1.0**	**1.2**
Elbow45°	**0.8**	**0.6**	**0.8**	**0.9**
Elbow30°	**0.7**	**0.9**	**0.6**	**0.6**
Elbow15°	**0.5**	**0.6**	**0.4**	**0.3**
Inspection T	**2.2**	**2.9**	**2.1**	**2.8**
Right inspection tube	**0.7**	**0.3**	**0.7**	**0.5**

Length of the reductions PPS (m)	Ø 60/100	Ø 60	Ø 80/125	Ø 80
Elbow87°	**1.1**	**1.1**	**1.5**	**1.2**
Elbow45°	**0.8**	**0.6**	**1.0**	**1.4**
Elbow30°	**0.7**	**0.9**	**-**	**0.6**
Elbow15°	**0.5**	**0.6**	**0.4**	**0.3**
Inspection T	**2.2**	**2.9**	**2.6**	**2.8**
Right inspection tube	**0.7**	**0.3**	**0.6**	**0.5**
Inspection tube for flexible pipe	**-**	**-**	**-**	**0.3**

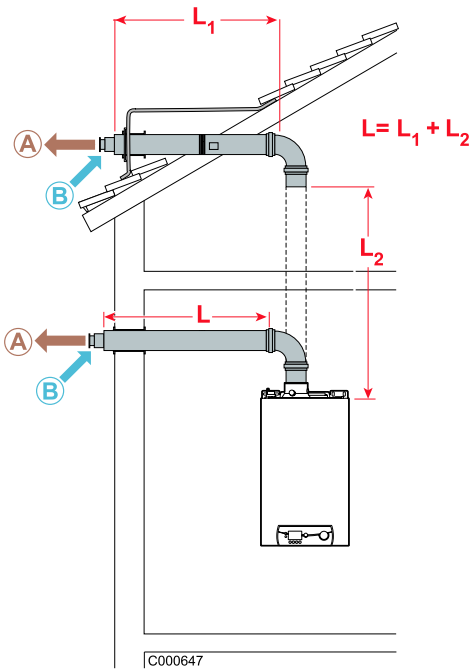
Belgium:Boilers can only be installed with the stove fittings provided by the constructor. For the list of parts, refer to the current price list.

1.7 Assembly horizontal or vertical forced flue and forced flue accessories

Refer to the instructions delivered with the package.

- **Horizontal forced flue Ø 60/100 mm (type C_{13x} connection)**

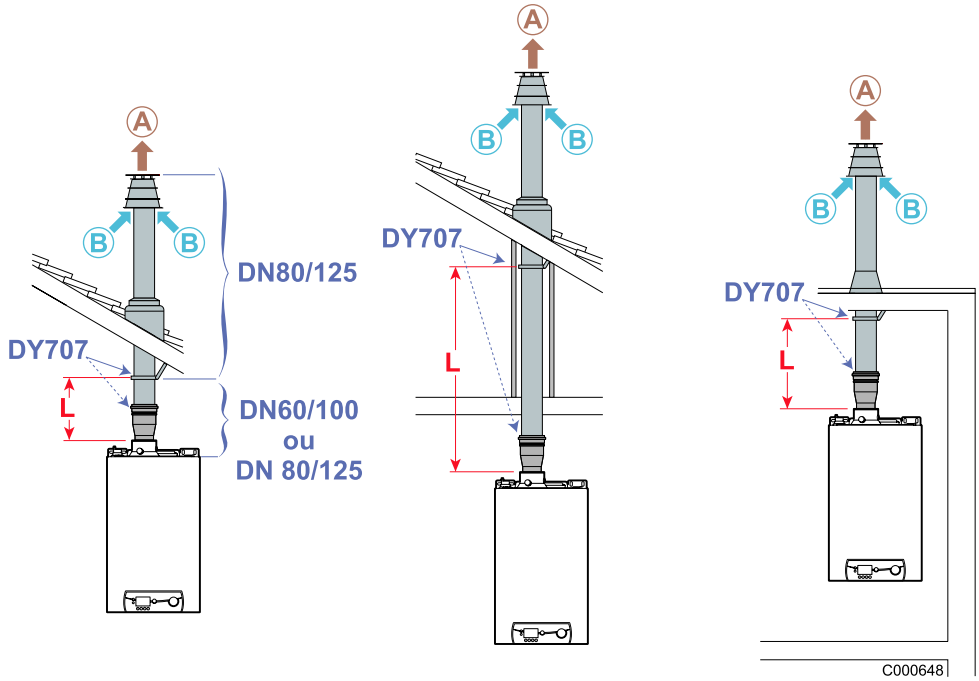
Connection to an outside wall or roof outlet.



A	Flue gases
B	Combustive air

- **Connection C_{33x} - Concentric vertical forced flue**

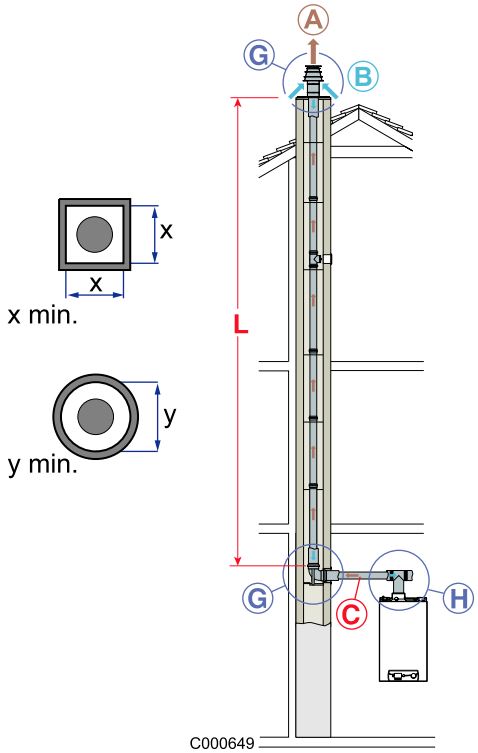
Connection to a sloping or flat roof.



A	Flue gases
B	Combustive air

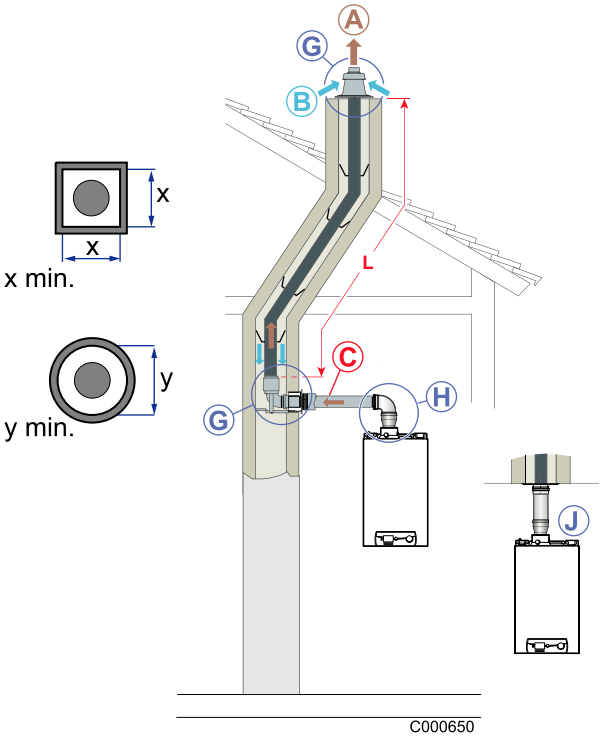
- **Connection C_{33x} (C_{33s}: For Belgium) - Concentric pipes in the boiler room - Single pipes in the chimney (combustive air in counter current)**

Discharge via conduit, fresh air in counter current.

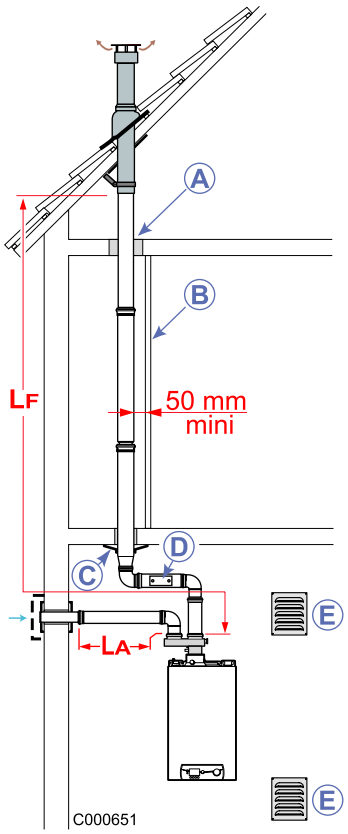


A	Flue gases
B	Combustive air
C	Horizontal section (Maximum length 1 m)

- **Connection C_{33x} (C_{33s}: For Belgium) - Concentric pipes in the boiler room - Inspection tube for flexible pipe (combustive air in counter current)**



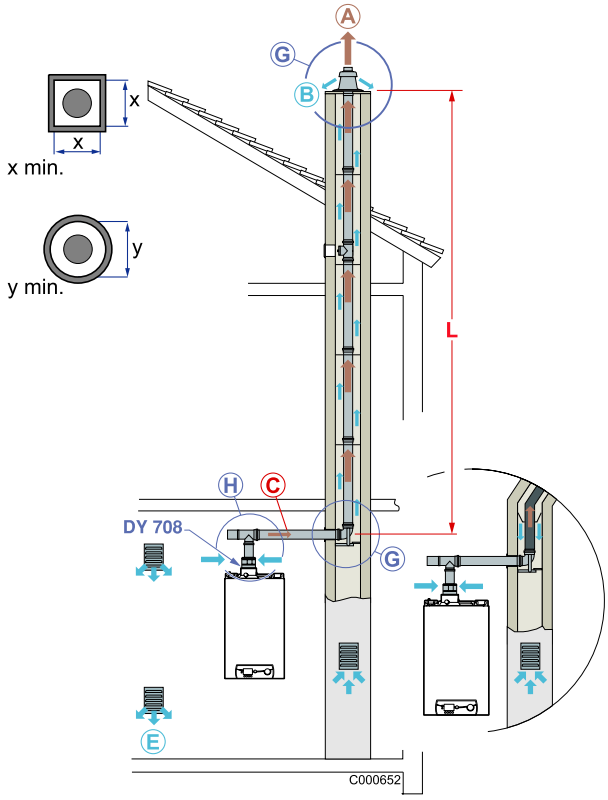
- **Separate air and flue gas connection Ø 60/100 mm over 2xØ80 mm (type C_{53} connection)**



A	Ventilation (100 cm2 minimum)
B	Casing classified (M1)
C	Leak proof rose
D	Inspection hatch
E	Openings (50 cm2)

- **Connection to a chimney Ø 80 mm type B_{23} connection)**

Chimney conduit fitting into a chimney, combustive air taken in the premises.



A	Flue gases
B	Horizontal section (max 1 m)
C	Chimney connection kit
D	Combustive air

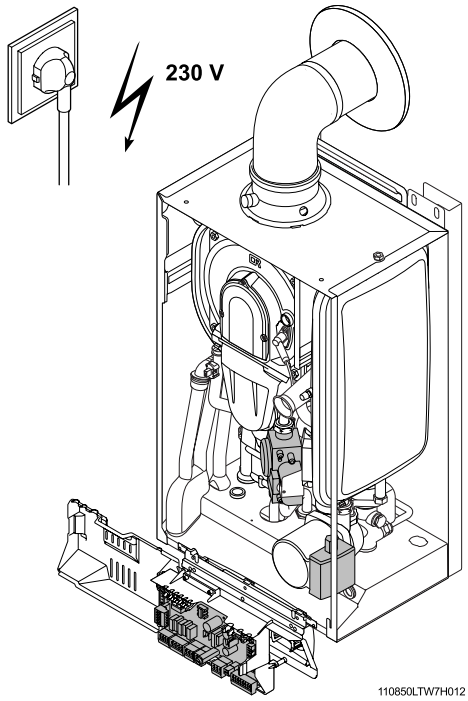
1.8 Electrical connection (230 V)

The boilers are delivered pre-fitted with a 3-conductor power supply cable with an available length of around 1.5 metres.

The appliance must be powered by a circuit containing an omnipolar switch with an opening distance 3 mm.

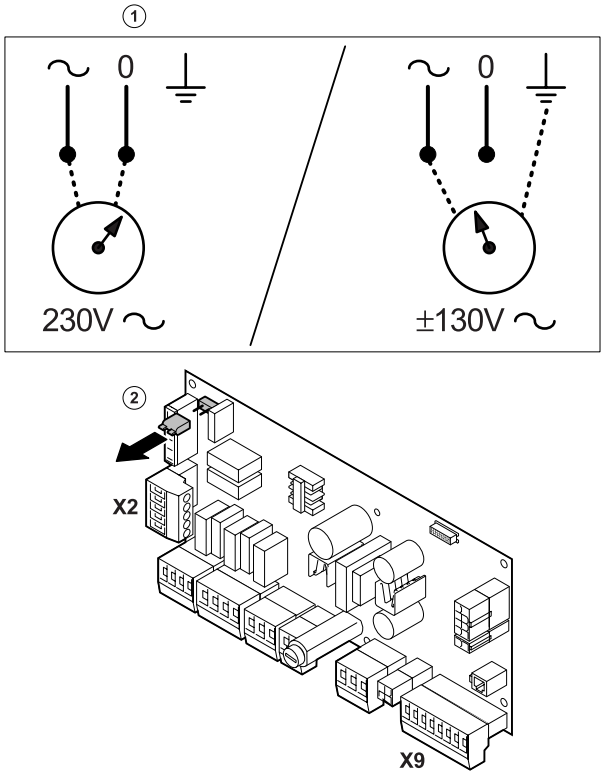
Only qualified professionnals may carry out electrical connections, always with the power off.

When connecting to the mains, be sure to respect live for the brown wire, neutral for the blue wire and earth for the green/yellow wire.



For Belgium + Certain European countries

If you use a two-phase electrical grid, jumper must be removed (130 V: Lane/Neutral).



The boiler is not sensitive to phase reversal.

2 Connecting the options

Optional equipment can be connected to the connectors on the control panel.

- Tilt the flap on the control panel.
- Open the protective hood.
- Make the connections according to the optional equipment you are using.

Programmable room temperature thermostat (Package AD 137) or Wireless settable ambient thermostat (Package AD 200) or Non settable ambient thermostat (Package AD 140).

Refer to the instructions delivered with the thermostat.

Outside sensor (Package AD 225)

Refer to the instructions delivered with the package.

Communicating remote controller: Easymatic (Package FM 50) or Easyradio (Package AD 201) with or without external sensor (Package AD 225) + Interface PCB (AD 221)

The connection can be made either by a 2-wire telephone cable, or by an electric cable with a cross-section that may be up 2 x 1.5 mm^2.

Refer to the instructions delivered with the package.

Underfloor heating: Easymatic (FM 50)/Easyradio (AD 201) + Outside sensor (AD 225) + Interface PCB (AD 222)

Refer to the instructions delivered with the package.

If you have underfloor heating: Connect the security thermostat in the external electrical connection box (See: Package AD 222).

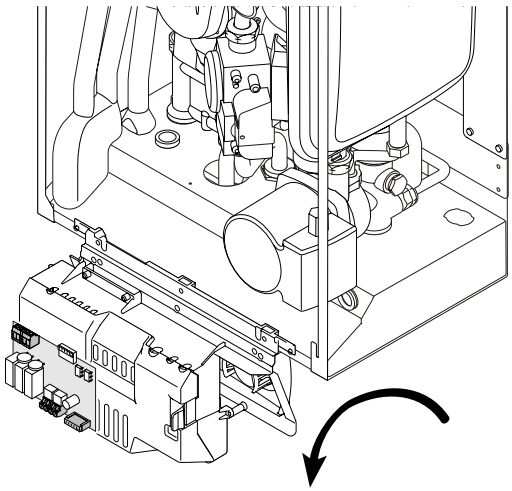
Accessories

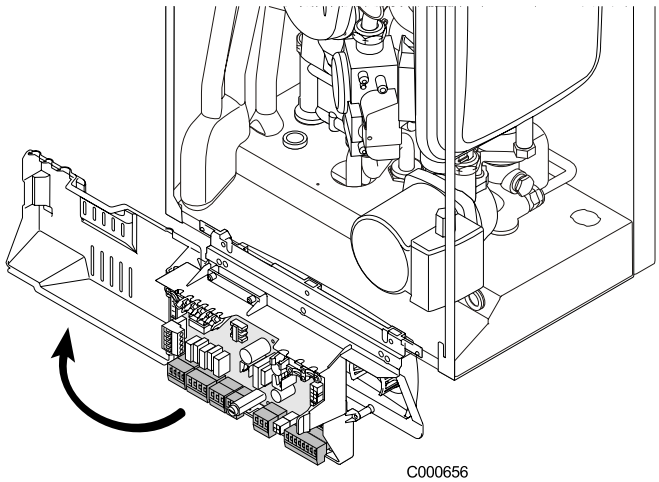
- Stand of frame (Package HG19)
- Pipework kit for stand of frame (Package HG20)
- Cover pipes (Package HG21)
- Replacement kit (ELM - Package HG23); (Saunier Duval - Package HG24); (Chaffoteaux et Maury - Package HG25); (Vaillant - Package HG26)
- Mounting frame + Disconnector (Package HG27)

Standard delivery. Possibility of separate orders for the pre-installation.

- Neutralisation station (Package HC33)
- Wall support (Neutralisation station) (Package HC34)
- 2 kg refill to neutralisation (Package HC35)
- Flow collector (For Belgium+Poland)

Refer to the instructions delivered with the package.

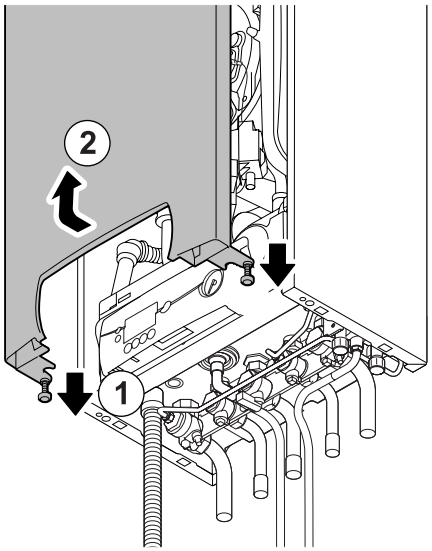


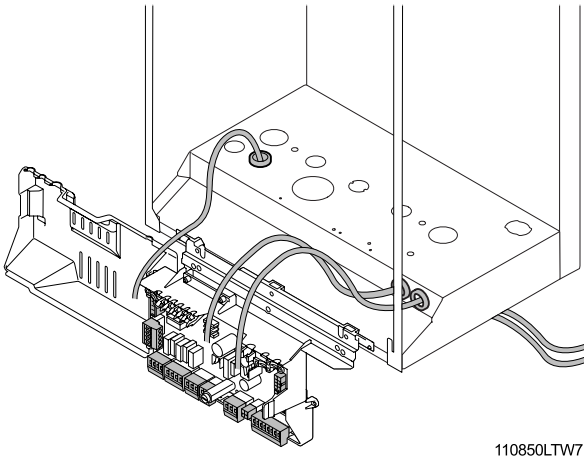


3 Connecting the external controls

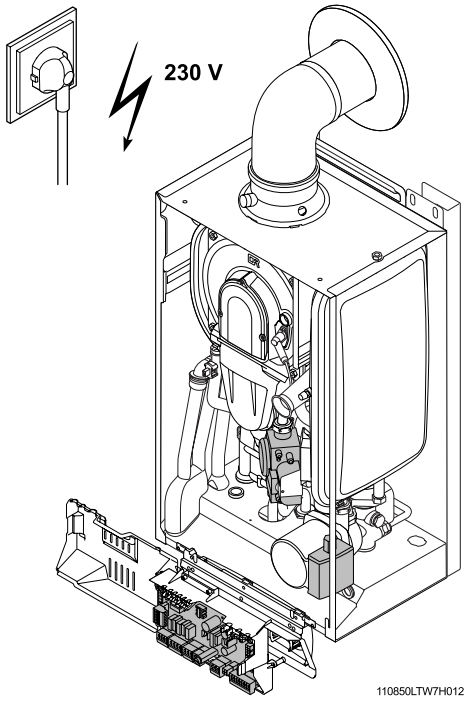
- Unscrew the 2 screws.
- Remove the front panel of the cladding.
- Run the cables in the cable clamps.
- Connect the cables to the connectors (See drawing opposite).

Switch off the mains electricity supply before carrying out any work.



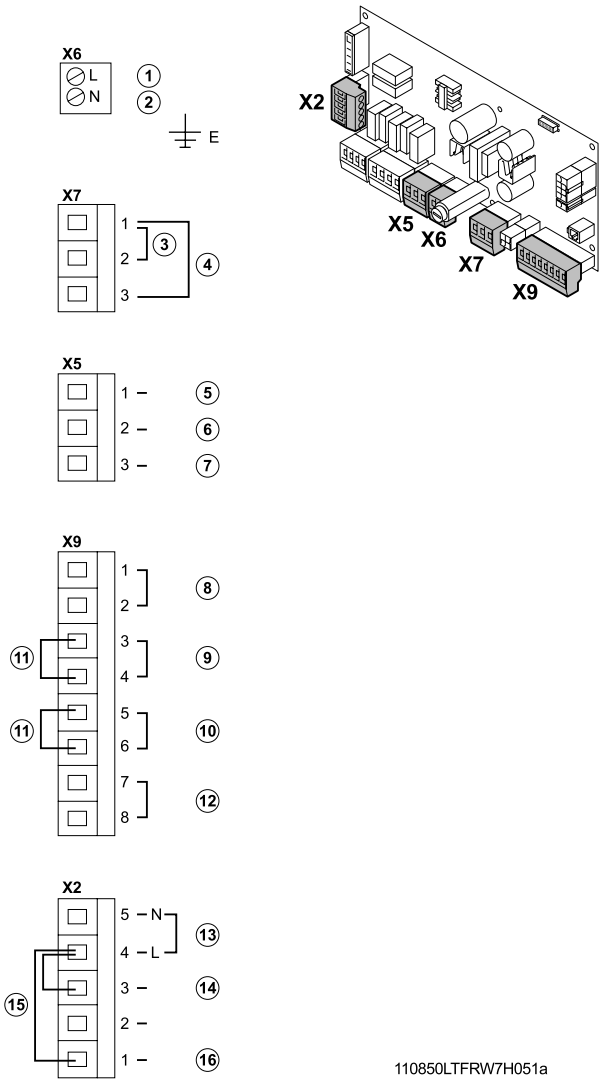


110850LTW7



110850LTW7H012

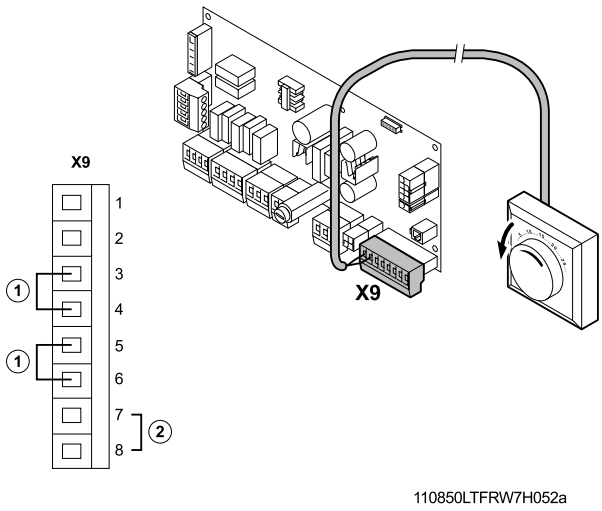
3.1 ON/OFF room thermostat



110850LTFRW7H051a

1. Lane 230 V - Intensity in Amperes: 3
2. Power supply - Neutral
3. Common alarm (Contact closed)*
4. Boiler in use (Contact open)*
5. Neutral
6. Tap open: DHW
7. Tap open: Heating
8. Outside sensor connection
9. Connecting the tank sensor (Remove bridge)
10. Boiler blockage input (Remove bridge)
11. Existing bridge
12. Cable **BUS**: AD 221 or AD 222 (Remove bridge)
13. Not connected
14. Switch: Domestic hot water (To use this function, remove the bridge between terminals 4 and 3)
15. Existing bridge. To be used when room thermostat is connected.
16. Switch: Heating (To use this function, remove the bridge between terminals 4 and 1)

*Depending on parameter settings



110850LTFRW7H052a

①: Existing bridge

②: Cable **BUS**: AD 221 or AD 222

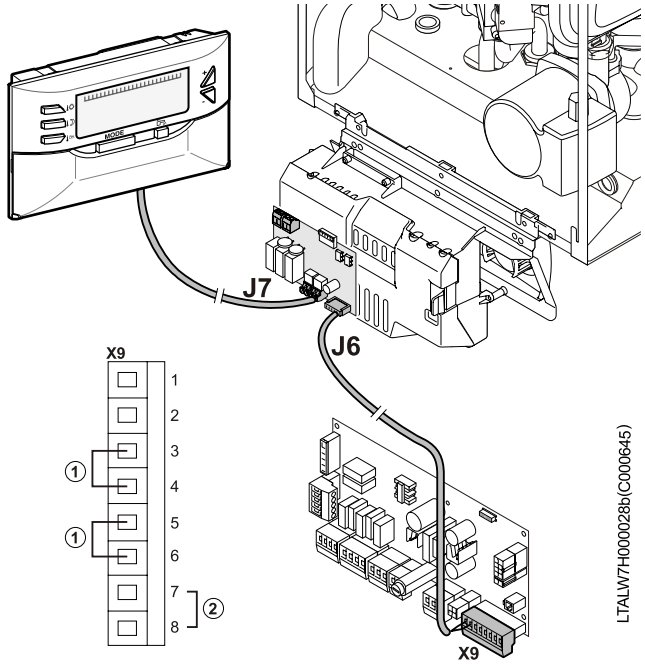
MCR boilers can be connected to a 2-wire on/off room thermostat.

Choose a location in a "reference" room representative of the room temperature to be taken into account if the remote control is used as a room sensor.

Connect terminals 7 and 8 on the thermostat to the terminals on connector X9.

i If you are using a room thermostat with anticipation resistance, parameter **P5** must no longer be defined as **0** but as **1**.

3.2 Easymatic,Easyradio regulation connection



①: Existing bridge

②: Cable **BUS**: AD 221 or AD 222

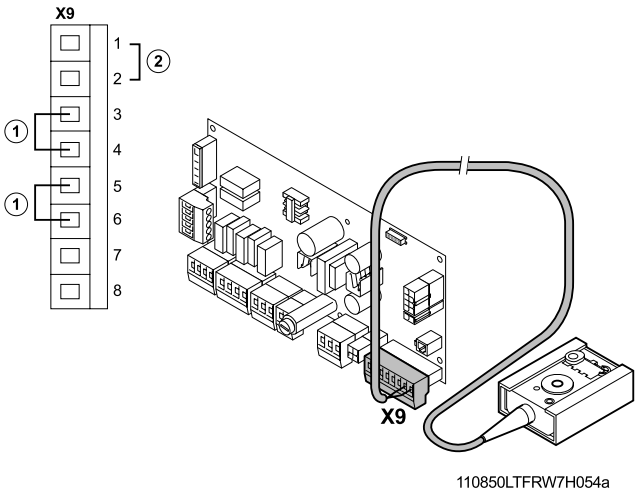
Modulating thermostats can be connected without further adaptation.

Choose a location in a "reference" room representative of the room temperature to be taken into account if the remote control is used as a room sensor.

- Connect the regulation on the interface PCB (J7).
- Connect connector J6 to the interface PCB on the X9 connector.

Refer to the instructions delivered with the package.

3.3 External temperature probe connection



①: Existing bridge

②: Outside sensor connection

An outside temperature sensor can be connected to connectors 1 and 2 on terminal X9.

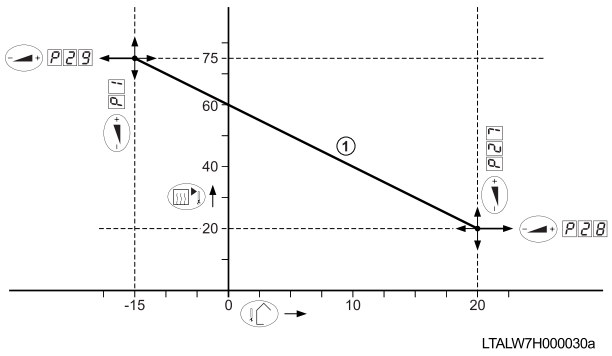
The boiler will regulate output using the setting point on the internal heating curve:

- Minimum temperature setting point = -15 °C
(Adjustment parameter **P29**, from 0 to -30°C)

- Maximum temperature setting point = 20 °C
(Adjustment parameter **P28**, from 0 to 40°C)

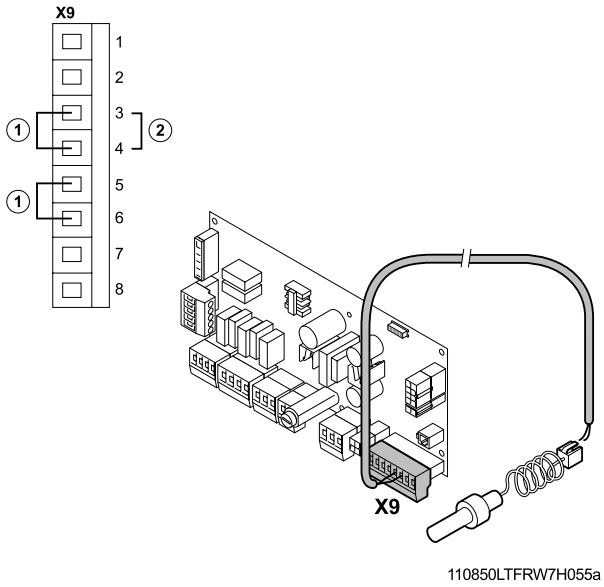
- Outlet temperature setting point at a maximum outside temperature = 20 °C
(Adjustment parameter **P27**, from 0 to 60°C)

- Outlet temperature setting point at a minimum outside temperature = 20 °C
(Adjustment parameter **P1**, from 20 to 85°C)



①: Factory setting

4 Connection of the domestic hot water sensor



110850LTFRW7H055a

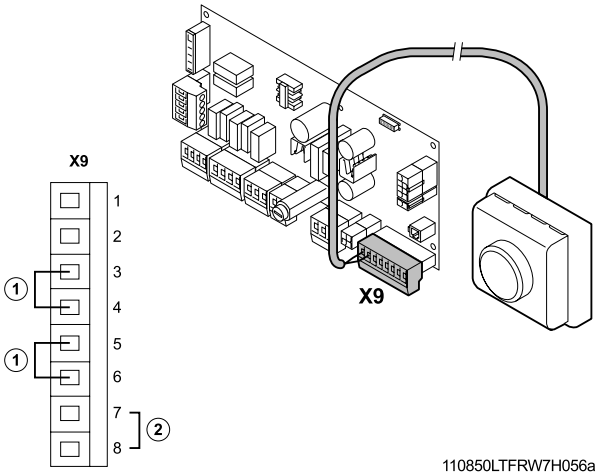
①: Existing bridge

②: Connecting the tank sensor

If an external domestic hot water tank is used with the MCR boiler, the probe without power from the domestic hot water tank can be connected to connectors 3 and 4 of terminal block X9.

The control unit automatically detects the presence of an external sensor.

5 Antifreeze protection



110850LTFRW7H056a

①: Existing bridge

②: Cable **BUS**: AD 221 or AD 222 or Thermostat ON/OFF

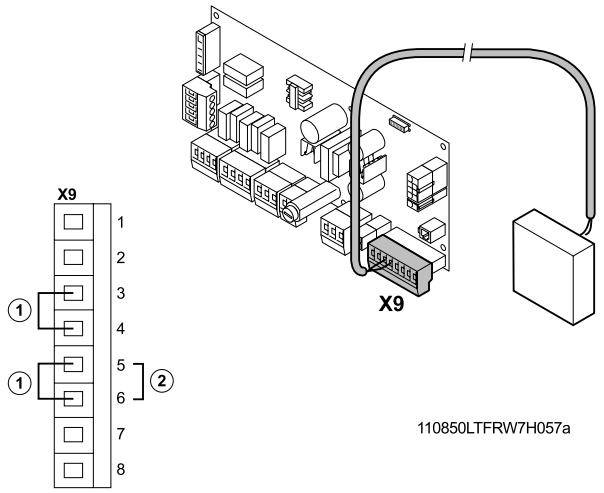
i MCR boilers must be installed in a frost-free environment

If the temperature of the central heating water in the boiler falls too much, the integrated protection device switches itself on:

- If the water temperature is lower than 7°C, the circulating pump is activated,
- If the water temperature is lower than 3°C, the boiler is activated,
- When the water temperature is above 10 °C, the boiler is switched off and the circulation pump runs for another 15 minutes.

If a room thermostat, connected via connectors 7 and 8, is activated, the boiler will operate permanently until it reaches the outlet setting point.

6 Safety contact



①: Existing bridge

②: Safety contact

MCR boilers are equipped with a security switch. A voltage-free switching device (e.g. an external gas pressure switch or a safety thermostat for underfloor heating) can be connected to connectors 5 and 6 on terminal X9 after disconnecting all of the cables. When the contact is open, the boiler turns off indicating code **9**; it will start again once the contact is closed.

7 Connection of a remote alarm transfer and boiler operation indication system (Not proposed)

The boiler is equipped with a 3 pin connector without power on terminal block X7. The terminal block can be used to connect to an external gas valve, a remote alarm transfer and boiler operation indication system.

- Connect the alarm transfer system to pins 1 and 2 of terminal block X7. Contact is closed in the event of a shutdown.

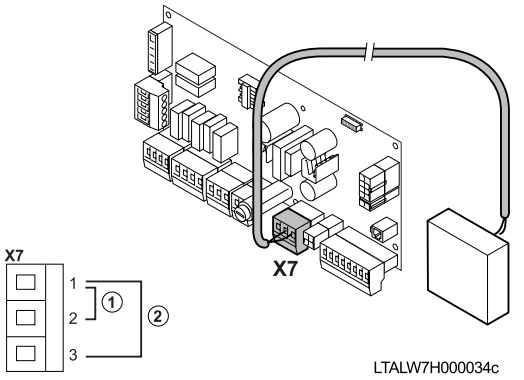
To do so: Set parameter **24** to **1**.

- Connect the boiler operation indication system to pins 1 and 3 of terminal block X7. If heating is required, the boiler thermostat closes the contact.

To do so: Set parameter **24** to **2**.

- Connect an external gas valve to pins 1 and 3 of terminal block X7. The contact is closed when the gas valve is activated.

To do so: Set parameter **24** to **3**.



①: Common alarm (Contact closed)

②: Boiler in use (Contact open)

- In mode (domestic hot water) or with Easymatic in mode (Summer), the pump operates during the production of domestic hot water. With an Easymatic, the pump shuts down after the pump flow switch-off delay. The heating/domestic hot water reversal valve remains in the DHW position.
- With room temperature thermostat
  - The pump switches off 2 minutes after the contact with the room temperature thermostat is opened. After the production of domestic hot water, if the room temperature thermostat is open, the pump switches off after 5 seconds and the heating/domestic hot water reversal valve remains in the DHW position.

  With Easymatic or Easyradio
  - When the desired room temperature is not reached, the pump operates continually. When the room temperature is too high, the pump is shut down after the pump switch-off delay (See "Easymatic"). If the room temperature is too high after domestic hot water production, the pump shuts down after the pump switch-off delay; the heating/DHW reversal valve remains in the DHW position (See "Easymatic").
- Easymatic and outside temperature sensor or Outside sensor alone

Refer to the instructions delivered with the package.

- If necessary, when the boiler temperature falls below 10°C, the pump starts up to ensure that the boiler is protected from frost.

The first start-up is to be performed by your installation engineer.

1 Commissionning

The boiler is preset in the factory to operate on natural gas. Operating pressure: 20 mbar.

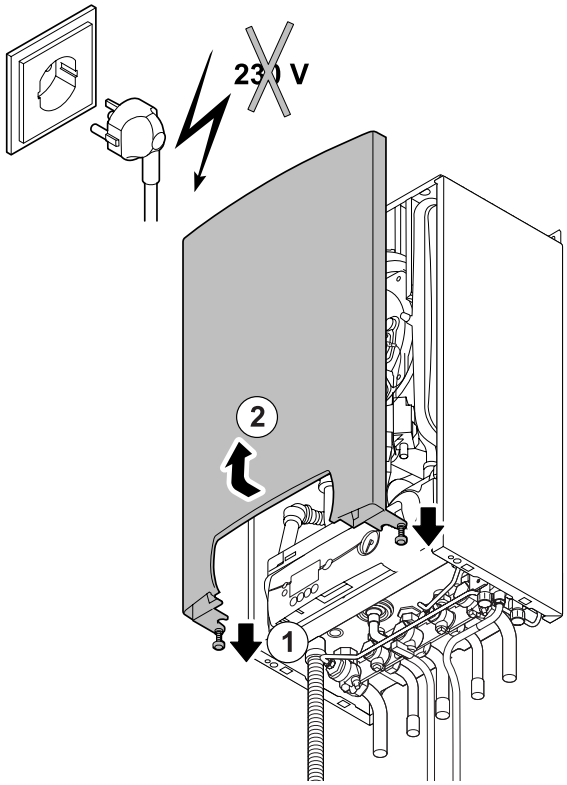
For Belgium: Operating pressure: 25 mbar.

1.1 Final checks before commissioning

The first start-up is to be performed by your installation engineer.

Before start-up, the heating installation must be completely emptied and rinsed.

Fill the installation with water.



110850LTW7H016

Cut the power supply to the boiler

1 Unscrew the 2 screws.

2 Remove the front panel.

Disconnect the 2 ignition electrodes from the connector/ignition on the gas valve.

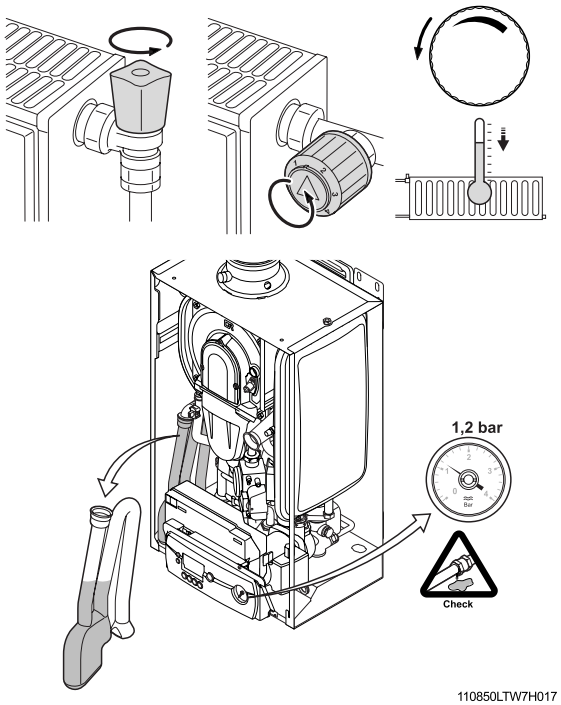
Check that the equipment is properly set for the type of gas used.

For Belgium: Any intervention on the gas valve unit is strictly forbidden.

1.2 Water and gas connections

First check that the water is circulating in the boiler (water pressure in the heating circuit, outlet and return valves open, valves and radiators open, etc.).

Opening the valve



Open the valves on all radiators connected to the heating system.

Fill the installation with water (Minimum pressure: 1 bar, Maximum pressure: 2.5 bar).

When filling, air may escape from the system via the automatic air bleed and the pump.

Use the bleed plugs provided, which are attached to the gas valve unit in the event of water leakage.

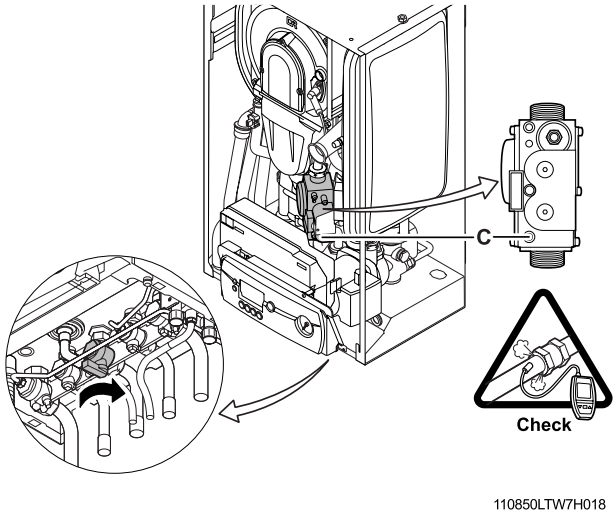
Do not allow water to get into the boiler.

Check the condensates discharge siphon; it must be filled with clean water up to the mark.

Check the boiler pump. Remove the central chrome screw to bleed the pump.

Carry out a water tightness check.

Measuring point on the gas block (C)



Open the gas valve.

Checking the gas supply pressure: Measurement point **C**.

▸14 Recommended pressure: See "Certifications".

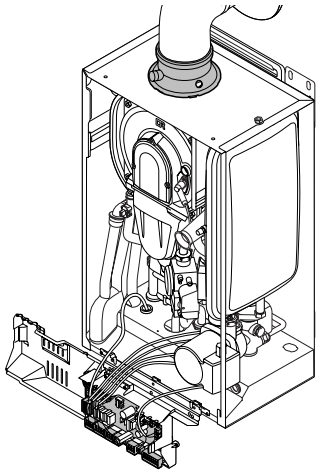
Carry out a gas tightness check. Maximum pressure: 60 mbar.

For Belgium: Maximum pressure: 100 mbar.

Bleed the gas supply pipe by unscrewing the measuring point on the gas valve unit. Tighten the measuring point when the pipe has been sufficiently bled.

Check the seals on the gas and water connections.

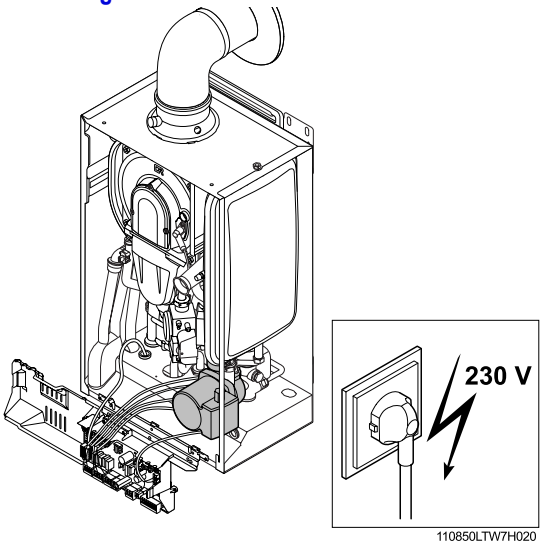
Check the electrical connections.



110850LTW7H019(C000654)

Check the electrical connections to the thermostat and the other external controls. Checking tightness (hydraulics, combusted gas discharge and gas).

1.3 Switching the boiler on



110850LTW7H020

Turn the boiler on (230 V).

Set the boiler regulation according to the heating request.

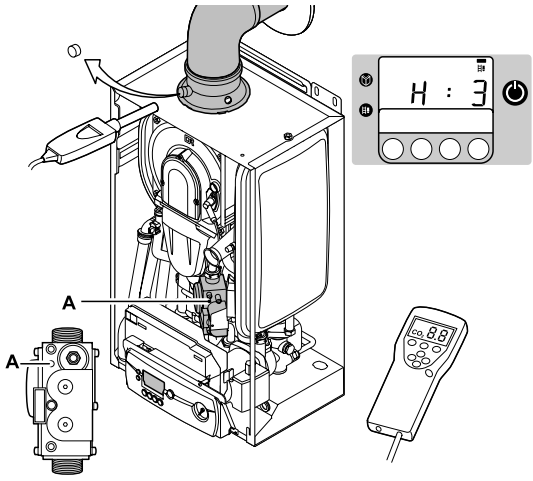
The boiler will begin an automatic venting-programm (which lasts approx. 3 minutes) and will do this every time the power supply is isolated.

The boiler is now ready to operate. The current operating status is shown on the display. The display shows **O**.

1.4 Setting the gas/air ratio (Full load)

Belgium: Any intervention on the gas valve unit is strictly forbidden.

The boiler is preset in the factory to operate on natural gas.



110850LTW7H021

Boiler type	Values: Setting			
	Fan speed (rpm)*		CO_2 (%)	CO_2 (%)
	Full load H:3			
	Natural gas	Propane	Natural gas	Propane
24	ca. 4600	ca. 4400	8.8 ±0.1	10.5 ±0.3
24/28MI	ca. 5500	ca. 5200	8.8 ±0.1	10.5 ±0.3
30/35MI	ca. 6300	ca. 6000	8.8 ±0.1	10.5 ±0.3
34/39MI	ca. 6700	ca. 6400	8.8 ±0.1	10.5 ±0.3

*In the event of forced operation at low speed, the second figure indicates the operating code.

Unscrew the flue gas requirement plug.

Connect the combusted gas analyser.

Set the boiler to full load.

Press the key. The display shows **H:3**: The full load is set.

Measure the O_2 or CO_2 content in the flue gases.

If this rate does not match the parameter value, correct the gas/air ratio using the adjustment screw **A** on the gas valve unit.

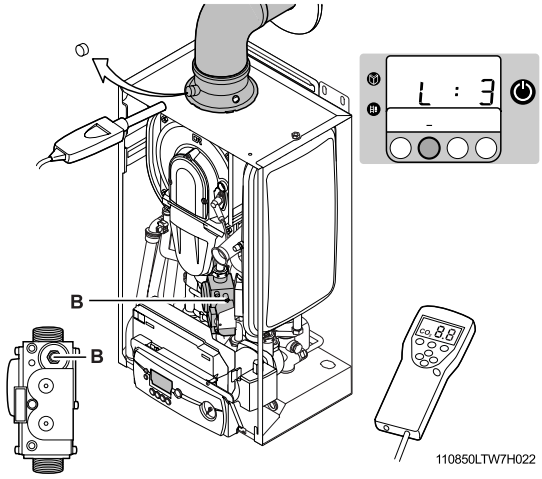
If the rate is too high, turn the screw **A** clockwise to reduce the gas flow.

If the rate is too low, turn the screw **A** anti clockwise to increase the gas flow.

Check the flame via the flame detection cell. It must not go out.

Check that the analysis probe is leakproof against gas at the sampling level point, the extremity of the probe is in the centre of the smoke evacuation pipe.

1.5 Setting the gas/air ratio (Part load)



Values: Setting				
Boiler type	Fan speed (rpm)*		CO_2 (%)	CO_2 (%)
	Part load: L:3			
	Natural gas	Propane	Natural gas	Propane
24	ca. 1300	ca. 2000	8.8 ±0.1	10.5 ±0.3
24/28MI	ca. 1300	ca. 2000	8.8 ±0.1	10.5 ±0.3
30/35MI	ca. 1300	ca. 2000	8.8 ±0.1	10.5 ±0.3
34/39MI	ca. 1300	ca. 2000	8.8 ±0.1	10.5 ±0.3

Set the boiler to part load.

Press the **-** key until the **L:3** symbol is displayed: The part load is set.

Measure the O_2 or CO_2 content in the flue gases.

If this rate does not match the parameter value, correct the gas/air ratio using the adjustment screw **B** on the gas valve unit.

If the rate is too high, turn the screw **B** clockwise to reduce the gas flow.

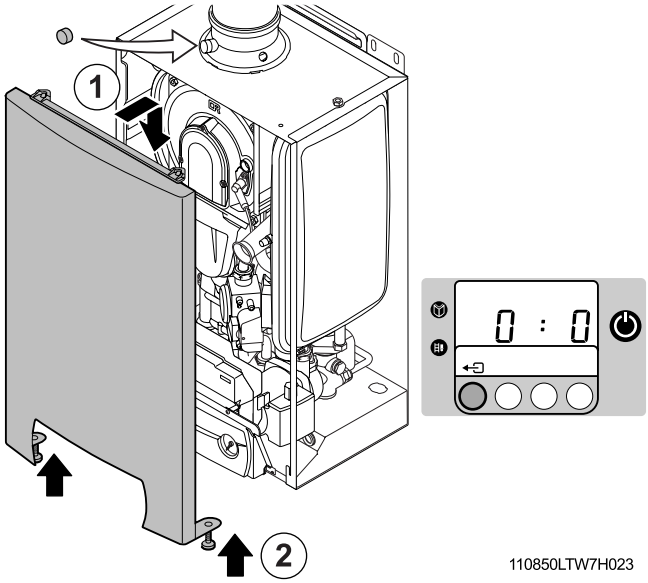
If the rate is too low, turn the screw **B** anti clockwise to increase the gas flow.

Check the flame via the flame detection cell. It must not go out.

i Check that the analysis probe is leakproof against gas at the sampling level point, the extremity of the probe is in the centre of the smoke evacuation pipe

Repeat the high speed test and the low speed test as often as necessary until the correct values are obtained without having to make additional adjustments.

1.6 Final checks before commissioning



Remove the analysis sensor ❶.

Replace the plastic plug onto the measuring tube.

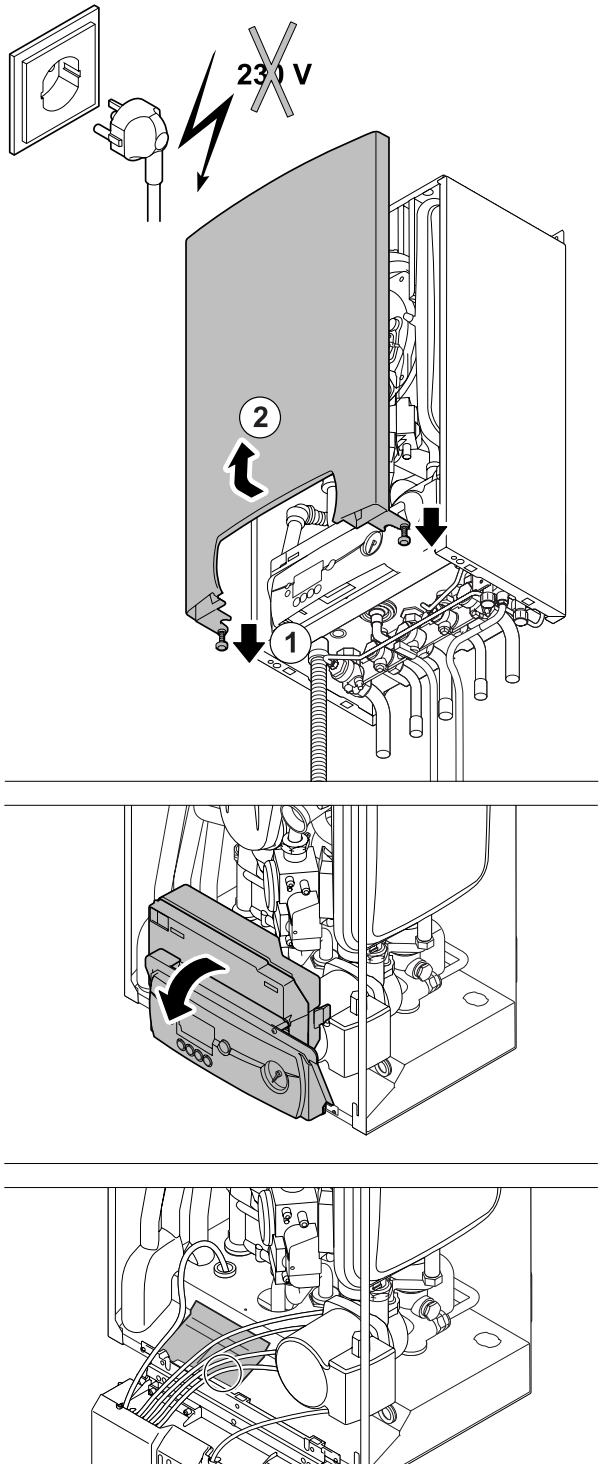
Put the upper front panel in place. Tighten the screws ❷.

To return to normal configuration, press briefly on button ⏎.

i if you do not press any keys, return to normal confiuration after 15 minutes.

Check the water pressure in the installation. Top up with more water if necessary.

Write down the type of gas on the sticker on the inside of the flap.



110850LTFRW7H059a

- Switch on the boiler. Activate the main switch in the installation.
- **Commissioning cycle**
  Screen display:
  - F XX: Software version
  - P XX: Parameter version
- The boiler will begin an automatic venting-programm (which lasts approx. 3 minutes) and will do this every time the power supply is isolated. The version numbers are displayed alternately.

The current operating status is shown on the display:

Heating only:	**production of domestic hot water:**
1: Fan ON	**1**: Fan ON
2: Boiler is igniting	**2**: Boiler is igniting
3: Operation: Heating mode	**4**: Operation: Domestic hot water mode
Heating only: condition satisfactory	**production of domestic hot water: condition satisfactory**
1: Post-ventilation	**1**: Post-ventilation
6: Pump operation (Heating mode)	**7**: Pump operation (Domestic hot water mode)
0: Stand-by	**0**: Stand-by

2.1 Display

- No display:
  - Check that the boiler is switched on (230 V),
  - Check the electrical connections,
  - Check the fuse (F2 = 2 AT, 230 V).
- Breakdown codes:
  - The symbol ⚠ flashes,
  - A malfunction code indicates the nature of the breakdown (for example: **E10**),
  - Correct the error if possible,
  - Press key ↩ for 2 seconds: The boiler restarts.

i After an **E1**, **E2**, **E7**, **E10** or **E13** error, the 3-minute air venting cycle will take place before the boiler starts up.

2.2 Parameter display (See "Control panel")

2.3 Boiler setting

- "User" settings

Parameters **P1** to **P6** can be modified by the user in order to meet central heating and DHW comfort needs.

- "Installer" settings

Parameters **P17** to **dF** must only be modified by a qualified professional.

2.4 Setting different parameters (with access code)

To get acces to the error memory, the acces code **12** must be entered.

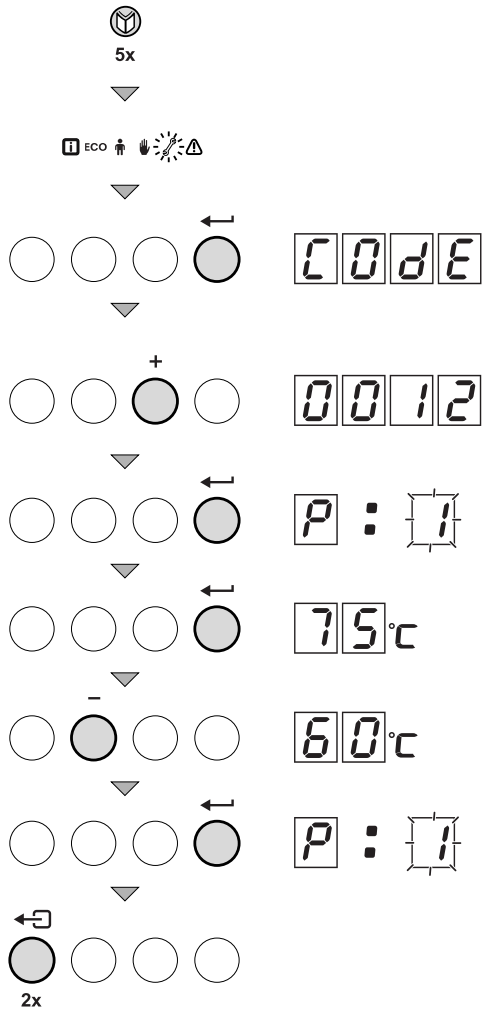
Adjustment must be done by a qualified professional.

Parameter	Description	Comments	Factory setting			
			24	24/28 MI	30/35 MI	34/39 MI
P17	Maximum ventilator speed (Heating)	10-70 X 100 rpm	**37**	**37**	**41**	**47**
P18	Maximum ventilator speed (DHW)	Do not modify	**46**	**55**	**63**	**67**
P19	Minimum ventilator speed (Heating+DHW)	Do not modify	**13**	**13**	**13**	**13**
P20	Start up speed for the ventilator	Do not modify	**25**	**25**	**28**	**30**
P21	Setting the pump speed	0 = Part load 1 = Full load	**0**			
P22	Operating time: Pump (Heating)	1 to 99 minutes	**2**			
P23	Connection with the heat recuperation unit	0 = No connection 1 = Connection	**0**			
P24	Remote alarm (Terminal X7)	0 = Stop "OFF" (Connectors 1 and 2 closed) 1 = Alarm messages (Connectors 1 and 3 closed) 2 = Operating light (Connectors 1 and 3 closed) 3 = External gas valve (Connectors 1 and 3 closed)	**0**			
P25	The regulator includes legionella protection function, that can be actived	0 = Stop 1 = Start 2 = Automatic (After commissioning, the boiler will operate once a week at 65°C for DHW)	**1**	**0**	**0**	**0**
P26	DHW cut-in temperature	2 to 15 °C	**5**			
P27	Heat curve set point: Flow temperature	0 to 60 °C	**20**			
P28	Heat curve set point: Outside temperature (Max)	0 to 30 °C	**20**			
P29	Heat curve set point: Outside temperature (Min)	-40 to 0 °C	**-15****			
P30	Boiler type	0 = MCR 1024 1 = MCR ... Combi (Heating only)	**1**	**0**	**0**	**0**
P31	Temperature, for which the production of domestic hot water is stopped, exceeded	0 to 20 °C	**15**			
PdF (PdU)	Factory setting	Parameter **dF**X appears on the identification plate; if this parameter is set as X, the factory parameters will be reinstated	**X**			
		Parameter **dU**Y appears on the identification plate; if this parameter is set as Y, the factory parameters will be reinstated	**Y**			

The character **- is not displayed.

Modification of the factory parameters may be detrimental to the functioning of the boiler.

2.5 Modify parameters



- Press the key until the symbol is displayed.
- Select the fitter menu using the ⟵ key. The symbol **COdE** appears.
- Enter the fitter code **0012** using the **-** or **+** key.
- To confirm, press the ⟵ key. The symbol **P:1** appears.
- Press the ⟵ key a second time. The symbol 75°C appears (Factory setting).
- Lower the value to 60°C using the **-** key.
- To confirm, press the ⟵ key
- To confirm, press the ⟵ key. The symbol **P:1** appears.
- If necessary, set other parameters by selecting them using the **-** or **+** keys.
- Press key 2 time to return to the current operating mode.

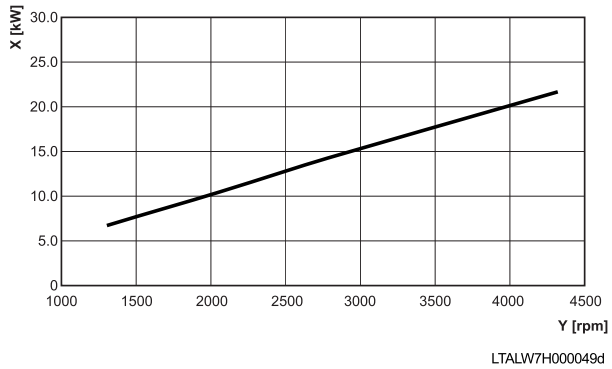
i If no selections are made in the various modes for 10 minutes, the boiler resumes the settings prior to manipulation.

2.6 Setting the maximum output (Hi): Heating

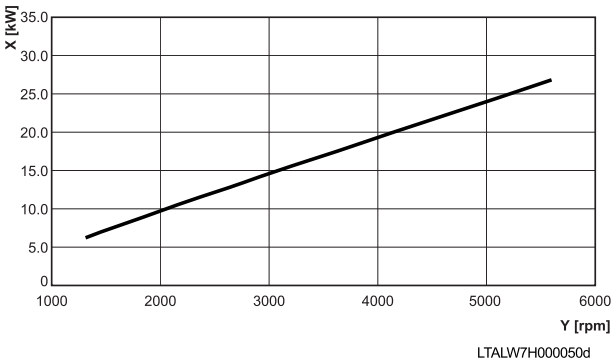
Parameter **P17** (maximum fan speed) is used to modify maximum central heating output.

Fan speed/boiler output ratio

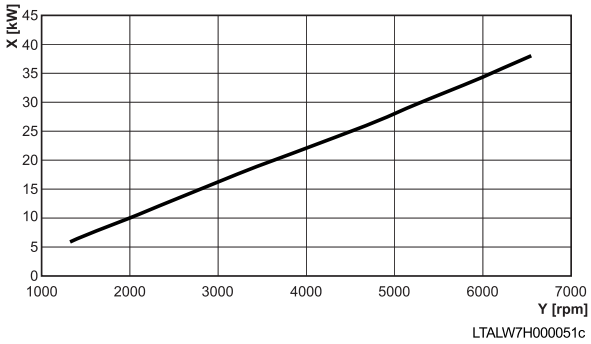
- MCR 24



- MCR 24/28 MI



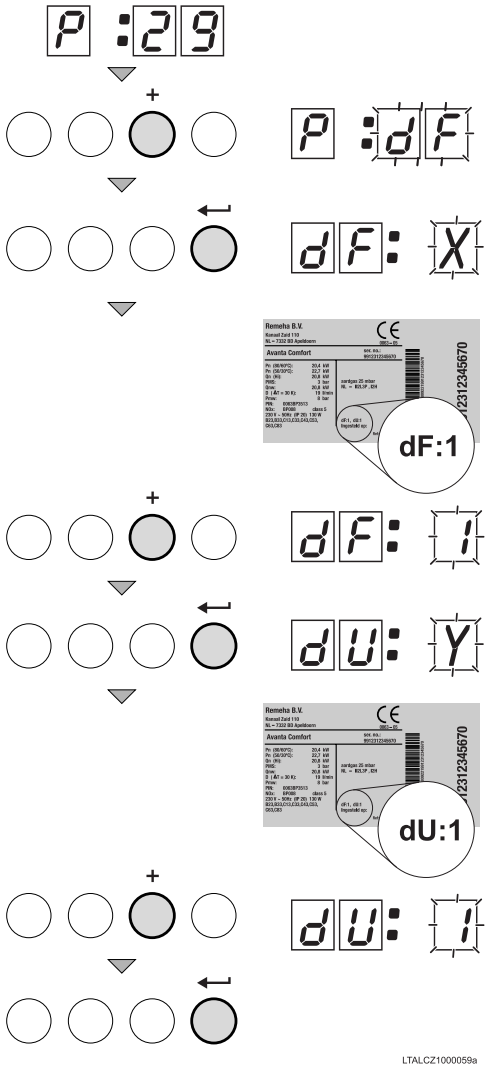
- MCR 30/35 MI, MCR 34/39 MI



X: Boiler power (kW)

Y: Fan rotation speed (rpm)

2.7 Return to the factory settings "Reset Param"



- Press the **+** key until the **P:dF** symbol is displayed.
- Press the ⟵ key. The symbol **dF**:X appears.

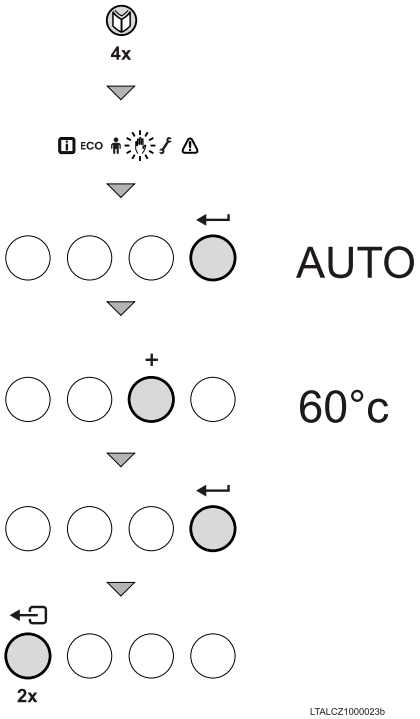
To reinstate the factory settings, enter the value X using the **-** or **+** key.

- Press the ⟵ key. The symbol **dU**:Y appears.

To reinstate the factory settings, enter the value Y using the **-** or **+** key.

- To confirm, press the ⟵ key.

2.8 Manual operation (✋)



- Press key ⟨M⟩ several times until the symbol ✋ flashes on the menu bar.
- Press the ⟵ key. The symbol **AUtO** appears (if outside sensor connected).

The outlet temperature is determined by the internal heating curve.

Minimum outlet temperature: Press the **+** key to modify the setting.

- To confirm, press the ⟵ key.

The installation is in manual mode.

- Press key ⟵ 1 time to deactivate the manual mode.

2.9 Switching off

Before any work is carried out on the equipment / heating system, the power supply must be disconnected (by means of the appropriate fuse or main switch, for example) and warning must be given before any reconnection.

2.10 Antifreeze protection

We recommend setting the boiler thermostat to a value lower than 10°C if using a classic installation.

Define parameter **P4** as **1** (energy-saving mode); the heat retention function will be deactivated.

Installation and room antifreeze protection is guaranteed if you are absent.

2.11 If the central heating system is not used for a long period, we recommend switching the boiler off

Switch the boiler off.

Cut the power supply to the boiler.

Cut the gas supply.

Adapting to another gas

For Belgium: Only SERV'élite is authorised to carry out the conversion of this appliance.

MCR boilers are preset in the factory for natural gas H.

The actions described below must be carried out by a qualified technician.

For Belgium: The boiler installation and gas connection must be carried out by a qualified professional in compliance with the NBN D 51.003, NBN D 30.003, NBN B 61.001, NBN B 61.002 and NBN D 51.006 standards.

1 Switching from Natural Gas to Propane

The conversion from Natural Gas to Propane requires only the adjustment of the burner and the fan speed.

2 Setting the control unit parameters

For conversion to propane

To obtain the gas valve setting used to start up with propane, use the following instructions:

- GN (G20) to G31: Turn the high speed adjustment screw 2 rotations clockwise

or

- Turn high speed screw clockwise until it is closed. Turn high speed adjustment screw 3.5 - 4 rotations counter clock wise.

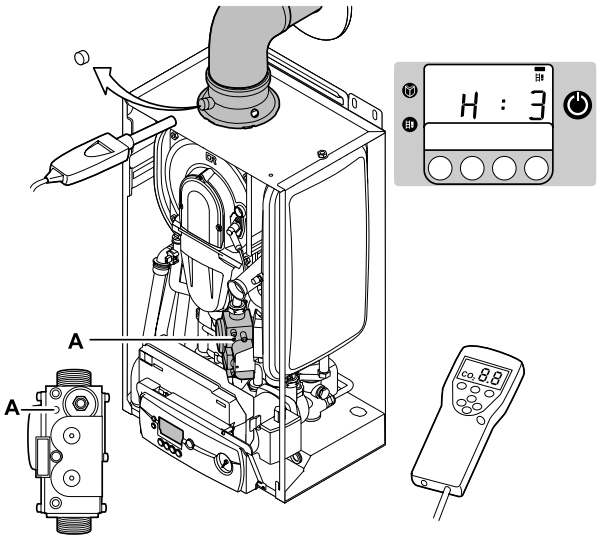
After this setting, the boiler will not have an optimum setting for propane.

For the precise setting, use a CO_2 measuring device and apply the settings procedures:

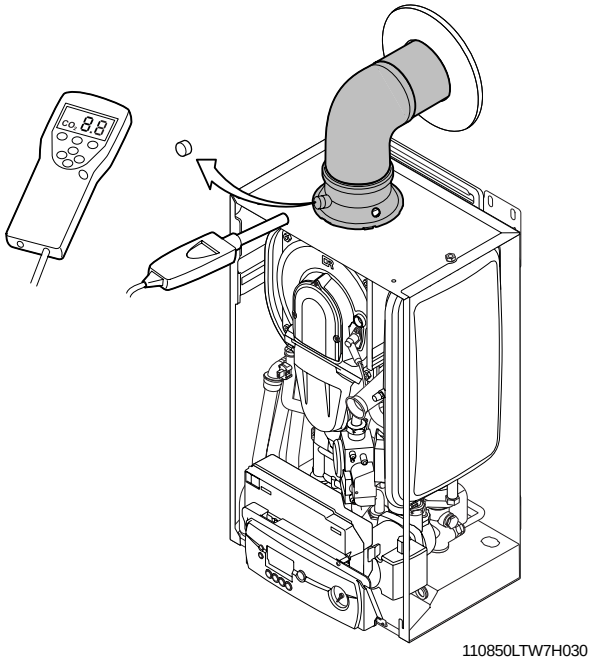
See "Modify parameters" and "Setting the gas/air ratio - Full load + Part load"

		Parameter	Nominal fan speed (rpm) MCR 24	Nominal fan speed (rpm) MCR 24/28MI	Nominal fan speed (rpm) MCR 30/35MI	Nominal fan speed (rpm) MCR 34/39MI	CO_2 %
Natural gas H (Factory setting : Gn by default)	Nominal power h3	P17	3700	3700	4100	4700	8.8±0.3
	Minimum output L3	P19	1300	1300	1300	1300	8.8±0.3
	Maximum DHW speed H3	P18	4600	5500	6300	6700	8.8±0.3
Propane (Factory setting : Pr)	Nominal power h3	P17	3500	3500	3900	4500	10.5±0.3
	Minimum output L3	P19	2000	2000	2000	2000	10.5±0.3
	Maximum DHW speed H3	P18	4400	5200	6000	6400	10.5±0.3

2.1 Adjusting the gas valve



110850LTW7H021



110850LTW7H030

i See "Setting the gas/air ratio".

MCR boilers require little maintenance. An annual inspection is compulsory.

Maintenance operations must be done by a qualified professional.

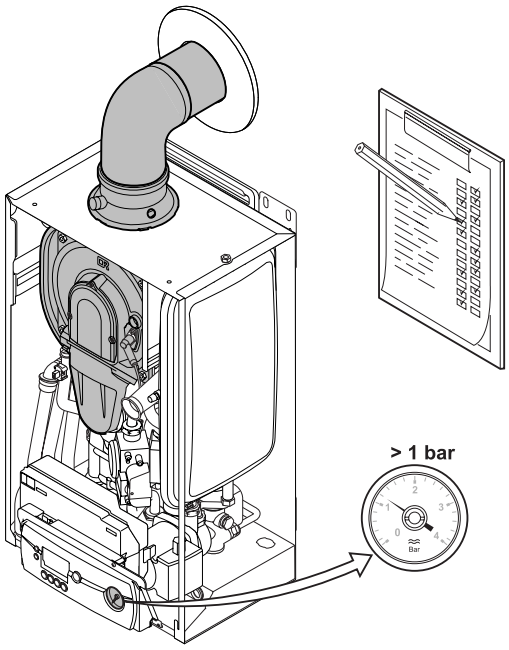
If, on annual inspection, the combusted gas analysis is not in compliance, a setting combustion operation must be carried out.

If the ionisation current is less than 3, check the ignition/ ionisation electrode as well as the ignition line and the earth connection.

Only original spare parts must be used.

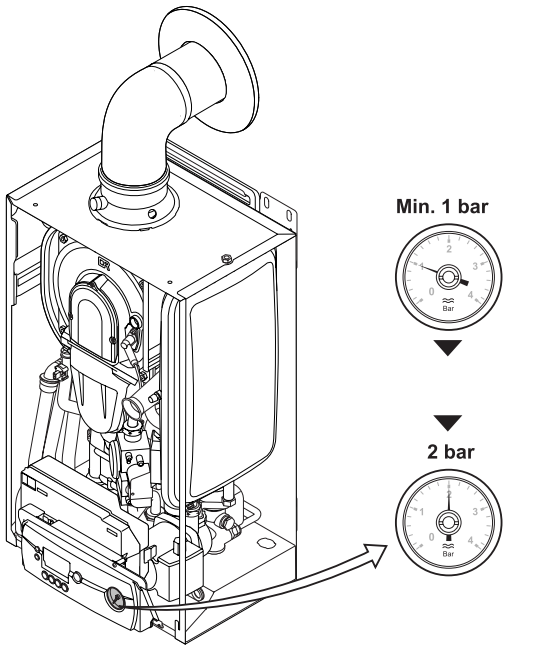
1 Inspection

Cut the power supply to the boiler.
Cut the gas supply to the boiler.



110850LTW7H025

1.1 Checking the hydraulic pressure

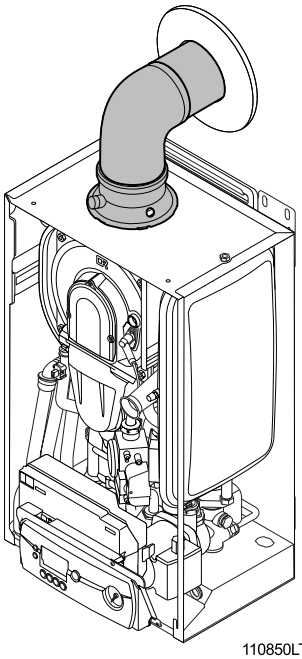


110850LTW7H026

Minimum pressure: 1 mbar. Add water to the installation if necessary.

Carry out a visual check for the presence of any water leaks.

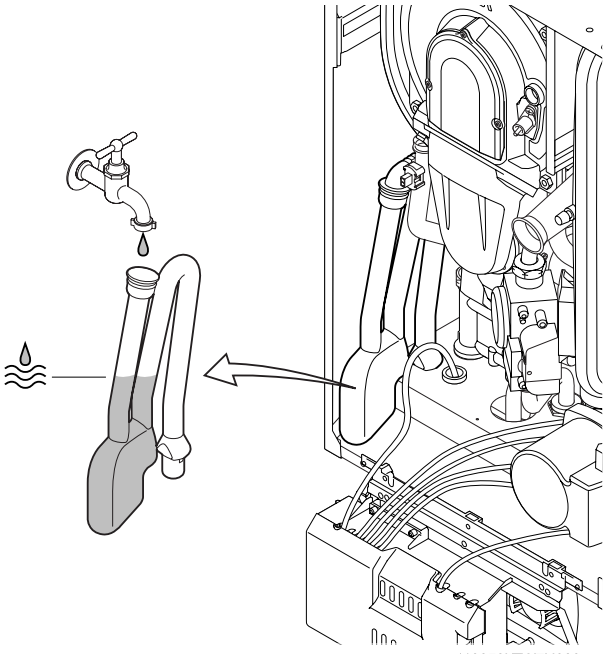
1.2 Check the fresh air inlet and flue gas discharge ducts (or the forced flue)



110850LTW7H027

The conduits must allow no leakage of flue gases and be resistant to corrosion.

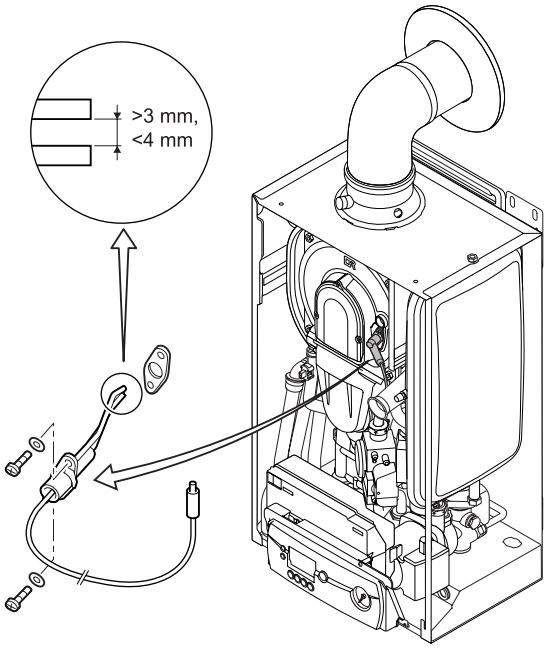
1.3 Checking condensates discharge (Siphon)



110850LTW7H028

Check the condensates discharge siphon; it must be filled with clean water up to the mark.

1.4 Checking the ignition electrode



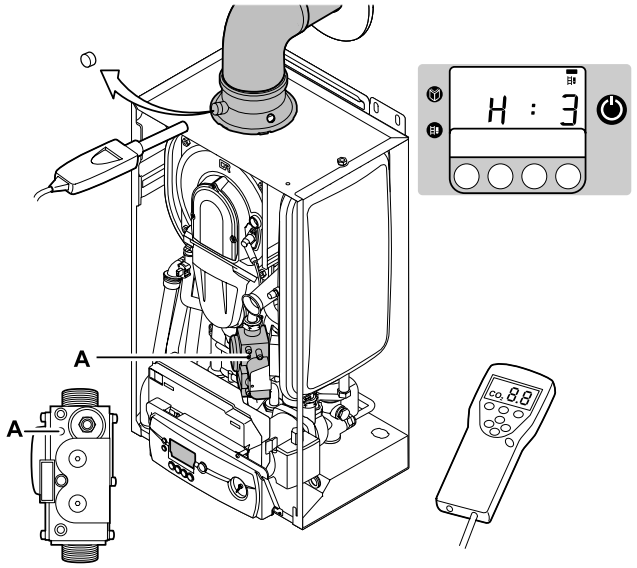
110850LTW7H029

- Wipe off all traces of deposits using an abrasive cloth.
- Check the gap between the electrodes (3 to 4 mm).
- Check the leak proof seal.
- Check the ionisation current. If the ionisation current is less than 3µA, check the ignition/ionisation electrode as well as the ignition line and the earth connection.
- Refit the ignition electrode .

i The ignition cable is fixed to the ignition electrode and therefore may not be removed.

1.5 Checking combustion

Measure the content of O_2/CO_2 and the burnt gas temperature at the flue gas sampling level point.



110850LTW7H021

- Unscrew the upper part of the flue gas measuring point.
- Measure the O_2 or CO_2 content in the flue gases.

i Check that the analysis probe is leakproof against gas at the sampling level point, the extremity of the probe is in the centre of the smoke evacuation pipe.

Values: Checks (Natural gas H				
Boiler type	Fan speed (rpm)*		CO_2 (%)	For Belgium CO_2 (%)
	Full load H:3	Part load L:3		
24	ca. 4600	ca. 1300	8.8 ±0.3	9.5 ±0.3
24/28MI	ca. 5500	ca. 1300	8.8 ±0.3	9.5 ±0.3
30/35MI	ca. 6300	ca. 1300	8.8 ±0.3	9.5 ±0.3
34/39MI	ca. 6700	ca. 1300	8.8 ±0.3	9.5 ±0.3

Values: Checks (Propane)			
Boiler type	Fan speed (rpm)*		CO_2 (%)
	Full load H:3	Part load L:3	
24	ca. 4400	ca. 2000	10.5±0.3
24/28MI	ca. 5200	ca. 2000	10.5±0.3
30/35MI	ca. 6000	ca. 2000	10.5±0.3
34/39MI	ca. 6400	ca. 2000	10.5±0.3

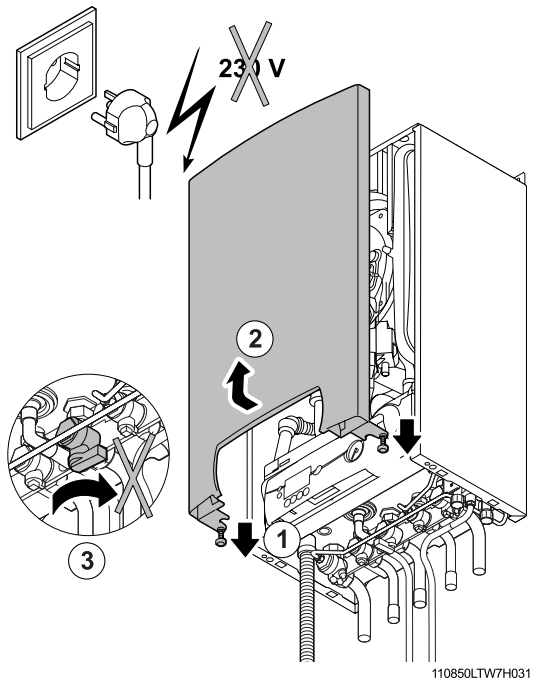
If the measured values differ from those given in the table, an adjustment is necessary. Check the setting of the gas/air ratio and, if necessary, correct it.

i If you still do not manage to reach the values indicated, a complete service of the boiler is required.
See "Maintenance".
Check the flame through the viewport; it must be stable and blue in colour, with orange particles around the edges of the burner (Full load).

Cut the power supply to the boiler.

Cut the gas supply to the boiler.

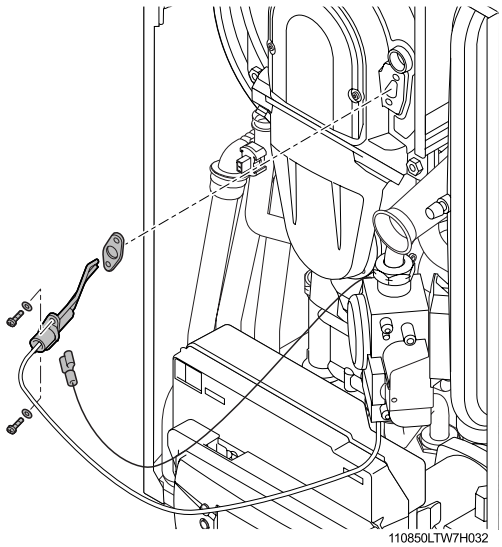
2.1 Open



1 Unscrew the 2 screws.

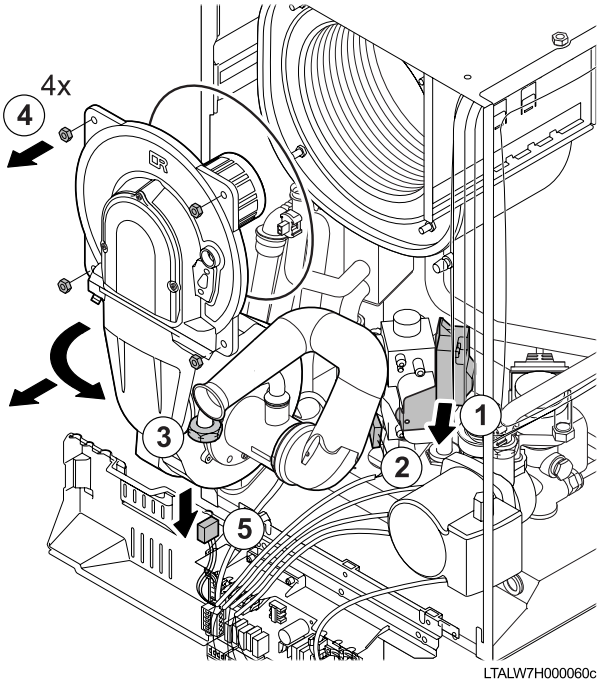
2 Remove the front panel. Disconnect the 2 ignition electrodes from the connector/ignition on the gas valve (3).

2.2 Checking the ignition electrode / ionisaton sensor



- Dismantle the electrode pin and the earth cable.
- Unscrew the 2 screws. Remove the unit.
- Clean or replace the ignition electrodes.

2.3 Remove the front plate from the combustion chamber



1 Disconnect the ignition electrode from the transformer.

2 Disconnect the electrical connection from the gas valve unit.

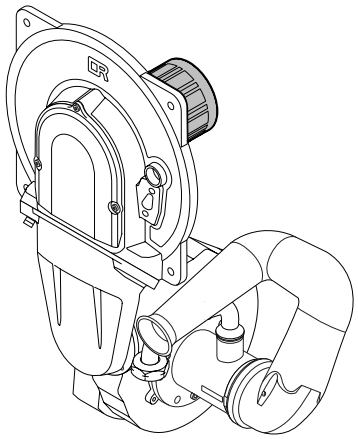
3 Remove the gas block connection nut.

Disconnect the electrical connection to the fan.

4 Remove the nuts from the inspection hatch on the front of the heat exchanger.

5 Then remove the inspection hatch, the fan and the gas valve unit.

2.4 Burner maintenance

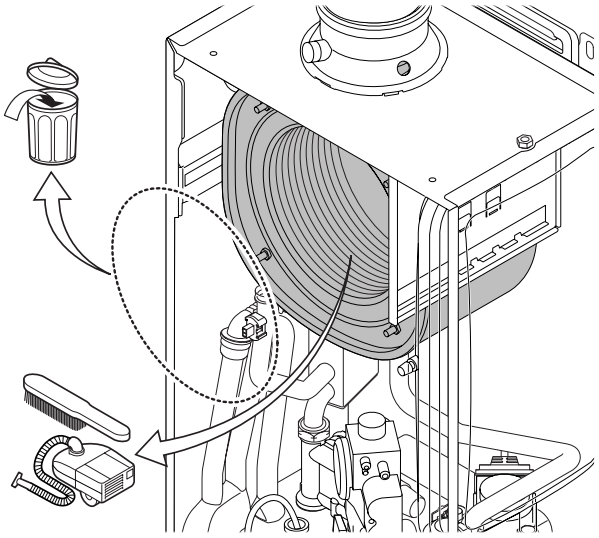


LTALW7H000061b

Clean the burner with a brush, a vacuum cleaner or a blower.

Inspect the burner to detect any damage or cracks in the surface. If the burner is damaged, replace it.

2.5 Maintenance of the heat exchanger



LTALW7H000062a

- Check the burner seal.
- Check the insulating component between the front plate and the thermal exchanger.

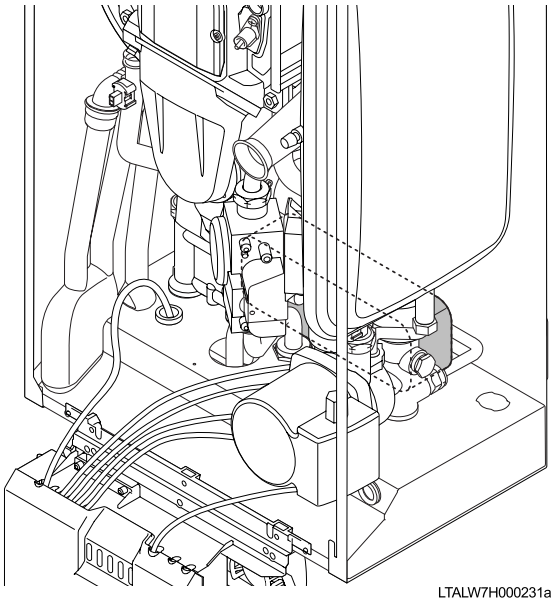
A damaged or hardened seal must always be replaced.

i Handle the front plate and the rear plate of the thermal exchanger with care; they must not come into contact with water.

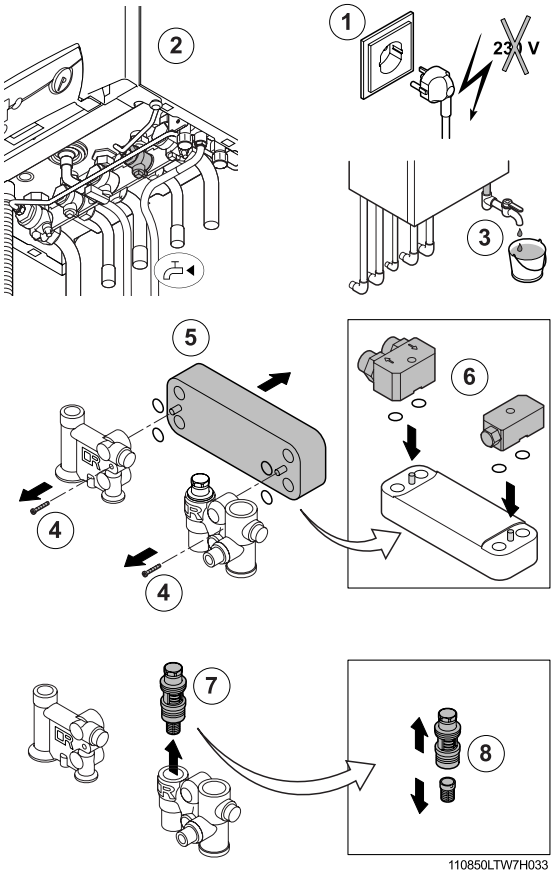
- Descale the exchanger in order to maintain its performance levels.
- Clean the inside of the heat exchanger using a stiff brush (optional).

2.6 Cleaning the plate exchanger (for MCR ... MI)

Maintenance and cleaning of the heater must be carried out at least once a year by a qualified technician.



LTALW7H000231a



110850LTW7H033

❶Cut the power supply to the boiler.

❷Cut off the cold water supply and drain the DHW tank.

❸Bleed the boiler.

❹Unscrew the 2 screws.

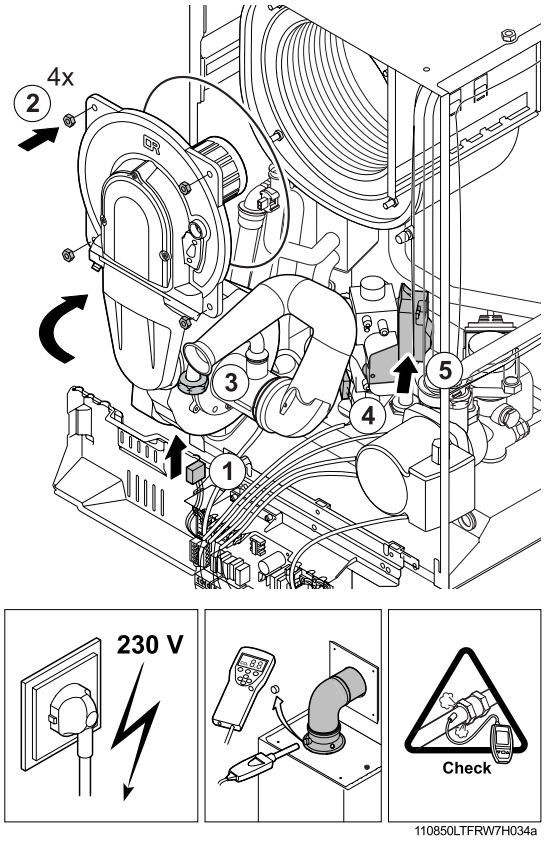
❺Remove the exchanger.

❻Clean the plate heat exchanger with a descaling product (citric acid pH 3). A special tool (accessory available as an option) can be used (See:Spare parts centre).

Rinse with clean water.

❼❽Remove the flow switch. If necessary, clean or replace the flow switch. Rinse with clean water.

2.7 Re-assembling the boiler



Follow in reverse order for re-assembly.

Do not forget to reconnect the fan connector before reattaching the fan to the thermal exchanger.
Check that the leak proofing material between the front plate and the thermal exchanger is correctly fitted.

Top up the installation with water.

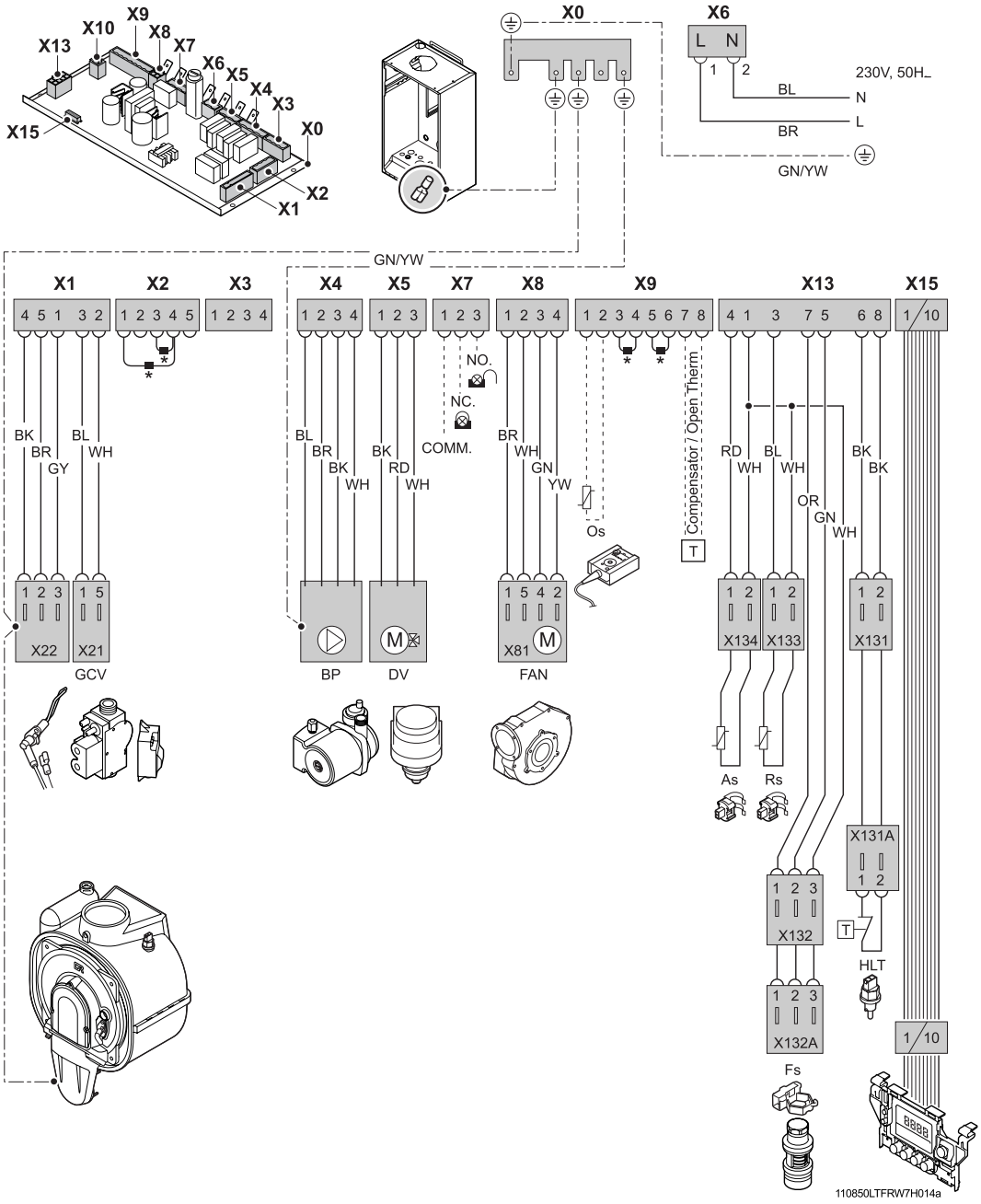
Restart the boiler.

Measure the O_2 or CO_2 content in the flue gases.

Check the ionisation current.

Check the seals on the gas and water connections.

Electrical diagram



BK	Black
BL	Blue
BR	Brown
GN	Green
GN/YW	Green/Yellow
GY	Grey
RD	Red
WH	White
YW	Yellow

As	Flow sensor
BP	Boiler pump
Fs	Flow switch
CP	Pump
DV	Inverter valve
GCV	Gas valve
HLT	Limiting thermostat
Os	Outside sensor (optional)
Rs	Return sensor
- - - -	not supplied / Not connected

Breakdown codes

1 Alarm code

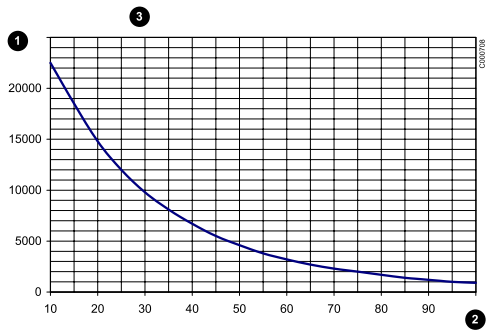
In the event of a breakdown, the symbol ⚠ and a flashing code are displayed.

Press key ⏎ for 2 seconds. If the error code remains on the screen, look for the nature of the error.

Alarm code	Description	Probable causes	Checks/Solution
E0	Outlet or return sensor error	Short circuit	Check the wiring. Replace the protection caps. If a faulty sensor is detected, it is possible to check the resistance at the various temperatures using a meauring device with a corresponing measurement range (e.g. a multimeter)
		Faulty sensor Sensor not or badly connected	Check that the sensors are operating correctly. If a faulty sensor is detected, it is possible to check the resistance at the various temperatures using a meauring device with a corresponing measurement range (e.g. a multimeter)* (20 to 25 °C). sensor resistance values: 12 to 15 kOhm.
E1	Flow temperature > Maximum operating temperature	The water level and/or pressure are too low	Check the water pressure in the installation (Pressure gauge)
		No circulation	Check that the boiler circulating pump is working. Insert a screwdriver into the slot in the pump spindle and turn the spindle several times to the right and left. Check the wiring. If the pump still does not work, it is faulty and must be changed.
		Too much air	When the pump is switched off, vent the system
		Deviation of the outlet or return temperature sensor	Check that the sensors are operating correctly. If a faulty sensor is detected, it is possible to check the resistance at the various temperatures using a meauring device with a corresponing measurement range (e.g. a multimeter)* (20 to 25 °C). sensor resistance values: 12 to 15 kOhm.
E2	Return temperature > Flow temperature	The water level and/or pressure are too low	Check the water pressure in the installation (Pressure gauge)
		No circulation	Check that the boiler circulating pump is working. Insert a screwdriver into the slot in the pump spindle and turn the spindle several times to the right and left. Check the wiring. If the pump still does not work, it is faulty and must be changed.
		Too much air	When the pump is switched off, vent the system
		Sensor not or badly connected	Check the wiring between the sensors and the control panel
		Deviation of the outlet or return temperature sensor	Check that the sensors are operating correctly. If a faulty sensor is detected, it is possible to check the resistance at the various temperatures using a meauring device with a corresponing measurement range (e.g. a multimeter)* (20 to 25 °C). sensor resistance values: 12 to 15 kOhm.

*When the sensors have been removed, replace the sensors a maximum of 40 mm from the thermal exchanger of the copper pipes.

Operating diagrams: Temperature sensor/Resistance



1 Resistance in ohm

2 Temperature (°C)

3 Temperature sensor/Resistance-Operating diagrams

Alarm code	Description	Probable causes	Checks/Solution
E3	Control panel: faulty Power supply cable: faulty	Control panel: faulty Power supply cable: faulty Power supply cable badly connected	Check the electrical connections.
E4	No flame detection (After a prolonged shutdown, up to 5 start-up attempts may be made)	No spark from the electrode	- Check the ignition electrode (spacing of the electrodes), its connector and its connection cable - Check the positioning of the electrode (gap: 3.5 mm) - Check the earth
		Presence of a series of sparks No flame detection	- First check that the gas valve is open, that the gas supply pressure is present, that the gas conduit has been sufficiently bled, that the air/flue gas conduit is not blocked and is not leaking, that the siphon is full and not blocked - If you use a two-phase electrical grid, jumper must be removed - Clean or replace the ignition electrodes - The CO_2 level at full load and part load
		Detection of a parasite flame Ionisation error (<3µA or >9µA)	- Check the combustion and the stability of the flame, - The CO_2 level at full load and part load - Check the electrical connections, particularly the earth - Clean or replace the ignition electrodes - Check the positioning of the electrode (gap: 3.5 mm)
E5	Ionisation error	Poor setting: CO_2	- Check the CO_2 level in the gas valve unit - Check the ignition electrode (spacing of the electrodes), its connector and its connection cable - Check the concentric combusted gas evacuation and combustive air inlet pipes - Check the high speed gas circulation,
E6	Detection of a parasite flame		Replace the control panel if it is faulty
E7	Water pressure in the boiler:absence Pump operation: Poor	The water level and/or pressure are too low	Check the water pressure in the installation Carry out a visual check for the presence of any water leaks
		No circulation	Check that the boiler circulating pump is working. Insert a screwdriver into the slot in the pump spindle and turn the spindle several times to the right and left. Check the wiring. If the pump still does not work, it is faulty and must be changed.
		Too much air	When the pump is switched off, vent the system
		Bad pump wiring	Check the electrical connections

Alarm code	Description	Probable causes	Checks/Solution
E8	Faulty fan	The fan does not work	- Check that the fan is working correctly - Check the fan wiring
		The fan does not stop or the number of rotations displayed is incorrect	- Check that the fan is working correctly - Check the fan wiring - Chimney draw must reach the prescribed values
E10	No water circulation during a fan cycle	The water level and/or pressure are too low	Check the water pressure in the installation Carry out a visual check for the presence of any water leaks
		No circulation	Check that the boiler circulating pump is working. Insert a screwdriver into the slot in the pump spindle and turn the spindle several times to the right and left. Check the wiring. If the pump still does not work, it is faulty and must be changed.
		Too much air	When the pump is switched off, vent the system
		Bad pump wiring	Check the electrical connections
E11	Air box temperature too high	Air leakage from heat exchanger	- Check the gasket on the inspection flange - Check the leak proof seal (Front plate) - Check that the front door is correctly fitted - Checking the ignition electrode
E13	Fuse protection on the thermal fuse is activated Replace the thermal fuse	Thermal fuse faulty	Check the wiring
		The water level and/or pressure are too low	Check the water pressure in the installation Carry out a visual check for the presence of any water leaks
		No circulation	Check that the boiler circulating pump is working. Insert a screwdriver into the slot in the pump spindle and turn the spindle several times to the right and left. Check the wiring. If the pump still does not work, it is faulty and must be changed.
E43	Parameter limits	Automation parameters	Modify parameters If there is a problem, contact your fitter, specifying the alarm code
E44	Parameter checks	Automation parameters	Modify parameters If there is a problem, contact your fitter, specifying the alarm code
E45	Factory setting	Automation parameters	Replace the control panel if it is faulty

2 Control stop or lock-out

Code no.	Meaning	Description
8	Short circuit	Measured start temperature **t1** > Outlet temperature defined (T_{set}). The boiler restarts automatically when the outlet temperature is lower than the defined outlet temperature
5	Control stop (3 to 10 minutes)	The defined outlet temperature has been reached and the heating request is still present
9	Lock-out	Maximum tank temperature exceeded or The residual heat ΔT between the temperature provided and the return termperature is > 45°C or The maximum temperature increase speed tolerated in the exchanger has been exceeded (>1°C/sec) or No circulation, The water level and/or pressure are too low. or Boiler blockage input: 1 or 2: open *i* The boiler restarts automatically after around 10 minutes

3 Faults (E+Number(XX))

The control panel on MCR boilers includes an error memory in which the last 16 errors are memorised.

In addition to the error codes, the following data are also saved:

- Number of times that the error occured (n: XX)
- Boiler operating mode selected (St: XX)
- The outlet temperature (T1:XX) and the return temperature (t2:XX) when the error occured

To get acces to the error memory, the acces code 12 must be entered.

3.1 Display

- Press the key until the ⚠ symbol is displayed.
- Press the ⏎ key. The display shows **Er0X** (for example 02 = Last error which occured).
- The **+** or **-** keys are used to scroll down the list of errors.
- Press the ⏎ key: Used to display details of the errors.
  - **EX** = Error code + Last error which occured (for example **E12**);
  - **StX** = Status code + Error code (for example **St3** = Central heating mode);
  - **nX** = Number of times that the error occured;
  - **t1X** = Flow temperature (for example **t175**);
  - **t2X** = Return temperature (for example **t260**)

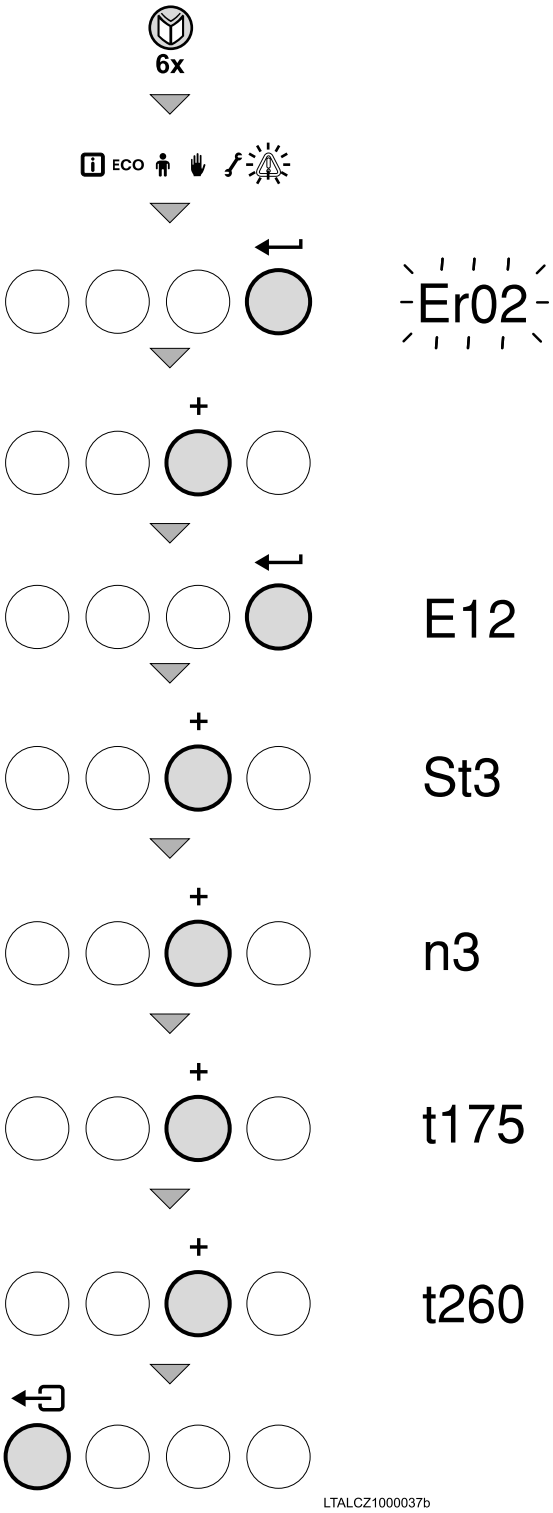
These data continue to scroll.

- Press the ⏎ key to interrupt the display cycle.

3.2 Deletion of the error display

The last message in the **Er:CL** list is displayed.

- Press the ⏎ key. The display shows **0**.
- Press the **+** key: Set parameter **0** to **1**.
- Press the ⏎ key to delete the errors from the error memory.
- Press the key ⏎ times to exit the error memory.



Warranty

You have just purchased one of our appliances and we thank you for the trust you have placed in our products.

Please note that your appliance will provide good service for a longer period of time if it is regularly checked and maintained.

Your fitter and our customer support network are at your disposal at all times.

Warranty terms

Starting from the purchase date shown on the original fitter's invoice, your appliance has a contractual guarantee against any manufacturing defect.

The length of the guarantee is mentioned in the price catalogue.

The manufacturer is not liable for any improper use of the appliance or failure to maintain or install the unit correctly (the user shall take care to ensure that the system is installed by a qualified fitter).

In particular, the manufacturer shall not be held responsible for any damage, loss or injury caused by installations which do not comply with the following:

- applicable local laws and regulations
- specific requirements relating to the installation, such as national and/or local regulations
- the manufacturer's instructions, in particular those relating to the regular maintenance of the unit
- the rules of the profession

The warranty is limited to the exchange or repair of such parts as have been recognised to be faulty by our technical department and does not cover labour, travel and carriage costs.

The warranty shall not apply to the replacement or repair of parts damaged by normal wear and tear, negligence, repairs by unqualified parties, faulty or insufficient monitoring and maintenance, faulty power supply or the use of unsuitable fuel.

Sub-assemblies such as motors, pumps, electric valves etc. are guaranteed only if they have never been dismantled.

France

The preceding dispositions are not exclusive of benefits for the purchaser of the legal guarantee as stated in Civil Code articles 1641 to 1648.

Belgium

The preceding dispositions about the contractual guarantee are not exclusive of profit if the need arises for the purchaser in Belgium of the applicable legal dispositions on hidden defects.

Switzerland

The application of the warranty is subject to the terms and conditions of sale, delivery and warranty of the company marketing our products.

Other countries

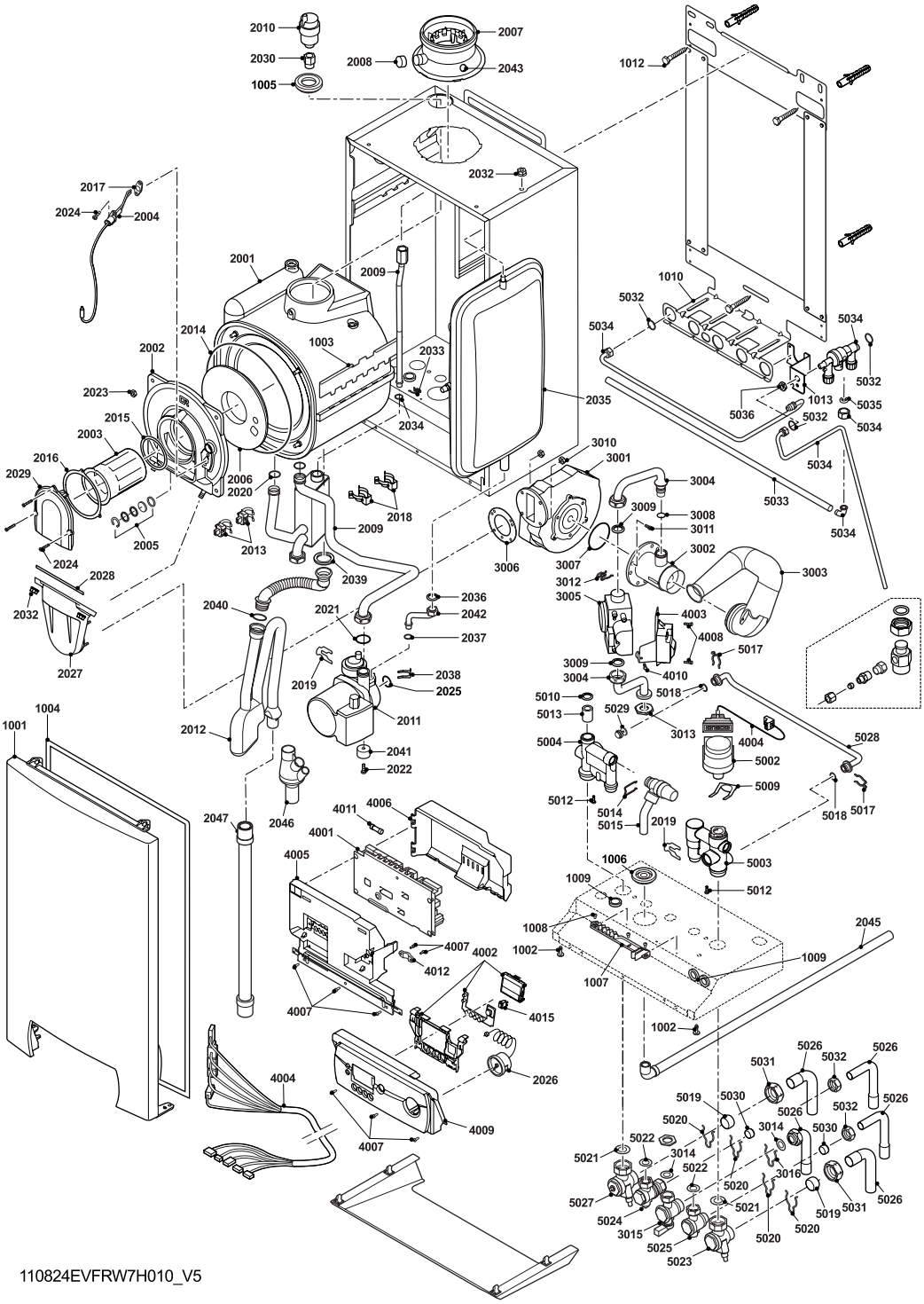
The above provisions do not restrict the benefit of the legal laws regarding hidden defects applicable in the buyer's country.

Spare parts - MCR 24, 24/28 MI, 30/35 MI, 34/39 MI

08/06/06 - 300008460-002-B

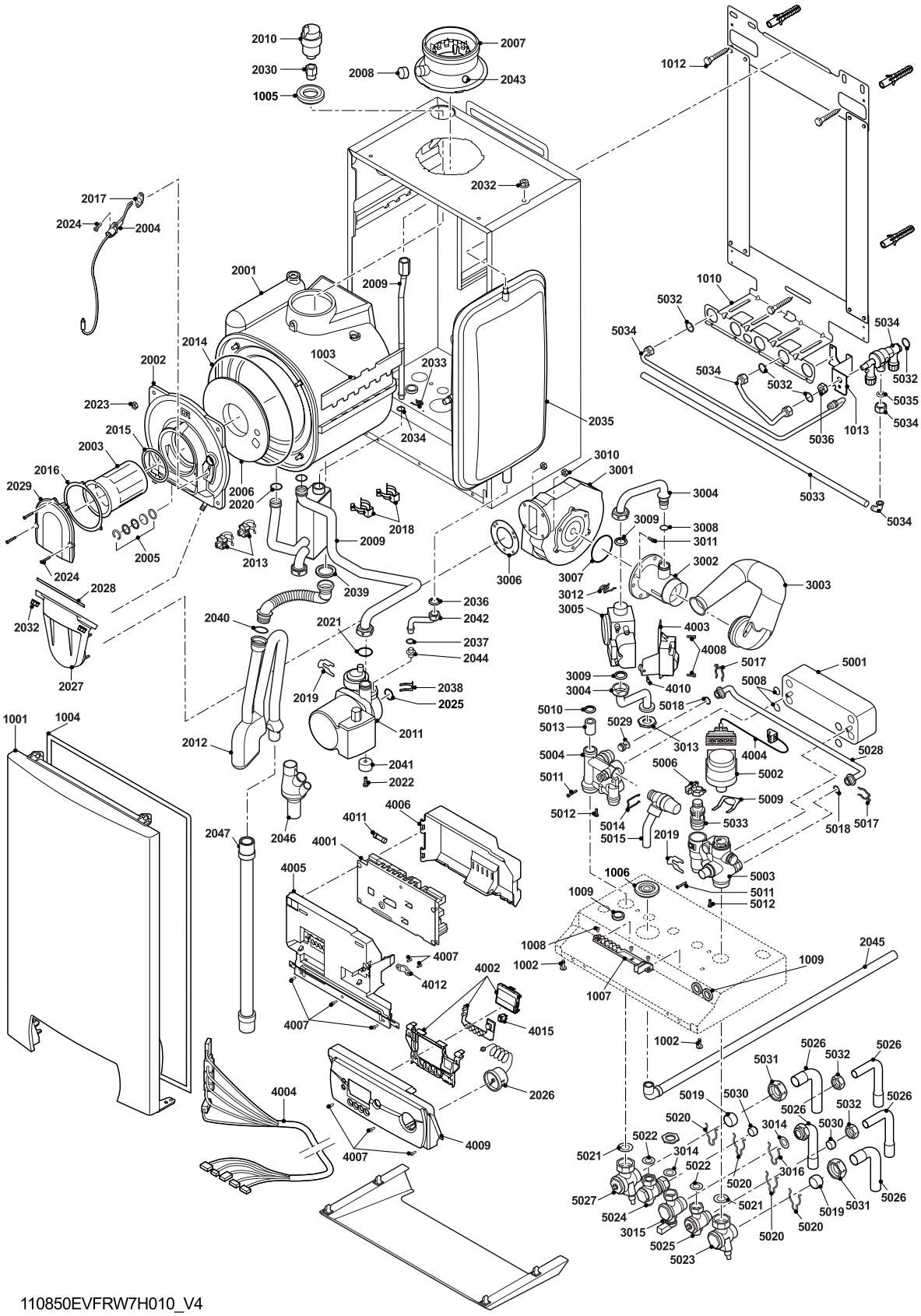
i to order a spare part, it is imperative to give the code number shown on the list, against the number of the part required.

MCR 24



DE DIETRICH THERMIQUE S.A.S. - Spare parts centre
4 rue d'Oberbronn - F-67110 REICHSHOFFEN - +33 (0)3 88 80 26 50 - +33 (0)3 88 80 26 98
cpr@dedietrichthermique.com

MCR 24/28 MI, 30/35 MI, 34/39 MI



Rep	Code no.	Description
	MCR 24	
1001	**S100223**	Front panel
1002	**S62708**	Screw M5x20 (20 pieces)
1003	**S62723**	Fastening plate: Exchanger (30 kW)
1004	**S62709**	Leakproof seal (10 m)
1005	**S62711**	Feed through (diameter 48x28) (5 pieces)
1006	**S62720**	Feed through (diameter 46x15) (10 pieces)
1007	**S62736**	Fixing clamp
1008	**S62721**	Screw K3.5x6.5 (15 pieces)
1009	**S62727**	Feed through (diameter 20) (15 pieces)
1010	**S62788**	Fixing batten
1012	**S62791**	Set of screws
1013	**S100230**	Disconnector bracket
2001	**S62777**	Heating body (24 kW)
2002	**S62779**	Exchanger inspection hatch (24 kW)
2003	**S62741**	Burner (Length 104 mm)
2004	**S62743**	Ignition electrode
2005	**S59118**	Indicator
2006	**S62744**	Insulation inspection hatch exchanger
2007	**S62768**	Flue gas outlet pipe
2008	**S62232**	Measurement device cap
2009	**S62755**	Hydraulic pipe (24 kW)
2010	**S62728**	Air vent
2011	**S62746**	Circulator UPS 15-60
2012	**S62749**	Siphon
2013	**S58733**	Sensor
2014	**S59596**	Combustion chamber door seal
2015	**S62717**	Toric gasket 69.5x3 (10 pieces)
2016	**S62718**	Toric gasket 94x2 (10 pieces)
2017	**S62105**	Electrode gasket (10x)
2018	**S59586**	Clip (18) mm) (10 pieces)
2019	**S58731**	Pump spring (18) mm) (10 pieces)
2020	**S59597**	Toric gasket 18x2.8 (10 pieces)
2021	**S56155**	Seal ø 23.8x17.2x2 (20 pieces)
2022	**S59578**	Screw M5x8 (20 pieces)
2023	**S54755**	M6 nut (20 pieces)
2024	**S62716**	Screw TORX M4x10 (15 pieces)
2025	**S58730**	O-ring
2026	**S62733**	Pressure gauge (0 to 4 bar
2027	**S62751**	Pre-mixing chamber hood
2028	**S62719**	Gasket
2029	**S62742**	Burner hood
2030	**S62729**	Bleed valve connection (5 pieces)

Rep	Code no.	Description
2031	**S62711**	Feed through (diameter 48x28) (5 pieces)
2032	**S44483**	M8 nut (10 pieces)
2033	**S58757**	Spring (17 mm) (10 pieces)
2034	**S62433**	O-ring (diameter 16x3.6) (10 pieces)
2035	**S62753**	RP 250 expansion tank (8 litres)
2036	**S67715**	Flat seal Ø 14.5x8.5x2 (10 pieces)
2037	**S62714**	O-ring (diameter 9.19x2.62) (10 pieces)
2038	**S62712**	Pump clip (10 pieces)
2039	**S62394**	Siphon seal
2040	**S62713**	O-ring (diameter 20x2.5) (10 pieces)
2041	**S62793**	Washer (5 pieces)
2042	**S62757**	Pump pipe - Expansion chamber
2043	**S62233**	Measurement device cap (5 pieces)
2045	**S100239**	Pipe for safety valve
2046	**S100238**	Condensates collector
2047	**S100237**	Siphon pipe
3001	**S100011**	Fan (24 V)
3002	**S58683**	Venturi
3003	**S62767**	Silencer
3004	**S62758**	Gas pipe (24 kW)
3005	**S58685**	Gas block
3006	**S45182**	Fan gasket (10 pieces)
3007	**S58739**	O-ring (diameter 63x3) (10 pieces)
3008	**S58762**	O-ring (diameter 14.5x2)
3009	**S56155**	Gasket (diameter 23.8x17.2x2) (20 pieces)
3010	**S46687**	M5 nut (10 pieces)
3011	**S59149**	Screw M6x12 (15 pieces)
3012	**S58757**	Spring (17 mm) (10 pieces)
3013	**S62794**	1/2" nut (5 pieces)
3014	**S56157**	Gasket (diameter 18.3x12.7x2) (10 pieces)
3015	**S62752**	Gas valve complete
3016	**S62725**	Clip (5 pieces)
4001	**S100068**	Safety box
4002	**S100227**	Display plate
4003	**S62750**	Ignition transformer
4004	**S100219**	Cable conductor
4005	**S62737**	Front panel (Control panel)
4006	**S62735**	Rear (Control panel)
4007	**S62710**	Screw K3.5x10 (10 pieces)
4008	**S14254**	Screw Parker 4.2x9.5 (10 pieces)
4009	**S100224**	Display
4009	**S100243**	Front panel (Control panel)
4010	**S33974**	Screw M4x16 (10 pieces)

Rep	Code no.	Description
4011	S43561	Fuse (2 AT) (10 pieces)
4012	S59372	Fixing clamp
4015	S100229	Switch
5002	S59132	3-way valve motor
5003	S100247	Hydraulic unit (Left)
5004	S100248	Hydraulic unit (Right)
5007	S58730	O-ring
5009	S59135	Spring (15.2 mm) (10 pieces)
5010	S56155	Gasket (diameter 23.8x17.2x2) (20 pieces)
5011	S59578	Screw M5x8 (20 pieces)
5012	S59141	Screw M5x18 (15 pieces)
5013	S59143	Outlet filter
5014	S62722	Clip (10 pieces)
5015	S62763	Safety valve (3 bar)
5016	S62720	Feed through (diameter 46x15) (10 pieces)
5017	S58757	Spring (17 mm) (10 pieces)
5018	S62433	O-ring (diameter 16x3.6) (10 pieces)
5019	S40824	Tightening collar (22 mm) (10 pieces)
5020	S62725	Clip (25 pieces)
5021	S62730	Flat joint (27.4x18.2x2)
5022	S56157	Gasket (18.3x12.7x2) (10 pieces)
5023	S62765	Valve (diameter 22)
5024	S100234	Stop valve (1/2")
5025	S62764	Valve (diameter 15)
5026	S100244	Pipes + Seals
5027	S100233	Stop valve (7/8")
5028	S62754	By-pass
5029	S62532	Valve
5030	S37365	Tightening collar (15 mm)
5031	S46023	Nut (22 mm) (10 pieces)
5032	S58766	Nut (15 mm) (10 pieces)
5032	S62715	Flat joint (diameter 14.5x8.5x2) (10 pieces)
5033	S100241	Pipe 12/9 (650 mm)
5034	S100246	Disconnector
5035	S100232	Gasket 8.4x5x1.6 (10 pieces)
5036	S100231	M10x1x5 nut (10 pieces)
	S100222	Leakproof plug (2 pieces)
MCR ... MI		
1001	S100223	Front panel
1002	S62708	Screw M5x20 (20 pieces)
1003	S62724	Fastening plate: Exchanger (24 kW)
1003	S62723	Fastening plate: Exchanger (30 kW)
1003	S100071	Assembly mounting: Heating body

Rep	Code no.	Description
1004	S62709	Leakproof seal (10 m)
1005	S62711	Feed through (diameter 48x28) (5 pieces)
1006	S62720	Feed through (diameter 46x15) (10 pieces)
1007	S62736	Fixing clamp
1008	S62721	Screw K3.5x6.5 (15 pieces)
1009	S62727	Feed through (diameter 20) (15 pieces)
1010	S62788	Fixing batten
1012	S62791	Set of screws
1013	S100230	Disconnector bracket
2001	S62777	Exchanger (24 kW)
2001	S100014	Exchanger
2001	S62778	Exchanger (30/39 kW)
2002	S100009	Exchanger inspection hatch
2002	S62779	Exchanger inspection hatch (24 kW)
2002	S62780	Exchanger inspection hatch (30 kW)
2003	S100017	Burner
2003	S62741	Burner (Length 104 mm)
2003	S62740	Burner (Length 165 mm)
2004	S62743	Ignition electrode
2005	S59118	Indicator
2006	S62744	Insulation inspection hatch exchanger
2007	S62768	Flue gas outlet pipe
2008	S62232	Measurement device cap
2009	S62755	Hydraulic pipe (24 kW)
2009	S62576	Hydraulic pipe (30 kW)
2010	S62728	Air vent
2011	S62746	Circulator UPS 15-60
2011	S62747	Circulator UPS 15-70
2012	S62749	Siphon
2013	S58733	Sensor
2014	S59596	Combustion chamber door seal
2015	S62717	Toric gasket 69.5x3 (10 pieces)
2016	S62718	Toric gasket 94x2 (10 pieces)
2017	S62105	Electrode gasket (10x)
2018	S59586	Clip (18) mm) (10 pieces)
2019	S58731	Pump spring (18) mm) (10 pieces)
2020	S59597	Toric gasket 18x2.8 (10 pieces)
2021	S56155	Seal ø 23.8x17.2x2 (20 pieces)
2022	S59578	Screw M5x8 (20 pieces)
2023	S54755	M6 nut (20 pieces)
2024	S62716	Screw TORX M4x10 (15 pieces)
2025	S58730	O-ring
2026	S62733	Pressure gauge (0 to 4 bar

Rep	Code no.	Description
2027	S62751	Pre-mixing chamber hood
2028	S62719	Gasket
2029	S62742	Burner hood
2030	S62729	Bleed valve connection (5 pieces)
2032	S44483	M8 nut (10 pieces)
2033	S58757	Spring (17 mm) (10 pieces)
2034	S62433	O-ring (diameter 16x3.6) (10 pieces)
2035	S62753	RP 250 expansion tank (8 litres)
2036	S67715	Flat seal Ø 14.5x8.5x2 (10 pieces)
2037	S62714	O-ring (diameter 9.19x2.62) (10 pieces)
2038	S62712	Pump clip (10 pieces)
2039	S62394	Siphon seal
2040	S62713	O-ring (diameter 20x2.5) (10 pieces)
2041	S62793	Washer (5 pieces)
2042	S62757	Pump pipe - Expansion chamber
2043	S62233	Measurement device cap (5 pieces)
2044	S100242	Circulating pump plug
2045	S100239	Pipe for safety valve
2046	S100238	Condensates collector
2047	S100237	Siphon pipe
3001	S100011	Fan (24 V)
3002	S58683	Venturi
3003	S62767	Silencer
3004	S62758	Gas pipe (24 kW)
3004	S62759	Gas pipe (30 kW)
3004	S100072	Gas pipe (35 kW)
3005	S58685	Gas block
3006	S45182	Fan gasket (10 pieces)
3007	S58739	O-ring (diameter 63x3) (10 pieces)
3008	S58762	O-ring (diameter 14.5x2)
3009	S56155	Gasket (diameter 23.8x17.2x2) (20 pieces)
3010	S46687	M5 nut (10 pieces)
3011	S59149	Screw M6x12 (15 pieces)
3012	S58757	Spring (17 mm) (10 pieces)
3013	S62794	1/2" nut (5 pieces)
3014	S56157	Gasket (diameter 18.3x12.7x2) (10 pieces)
3015	S62752	Gas valve complete
3016	S62725	Clip (5 pieces)
4001	S100068	Safety box
4002	S100227	Display plate
4003	S62750	Ignition transformer
4004	S100219	Cable conductor
4005	S62737	Front panel (Control panel)

Rep	Code no.	Description
4006	S62735	Rear (Control panel)
4007	S62710	Screw K3.5x10 (10 pieces)
4008	S14254	Screw Parker 4.2x9.5 (10 pieces)
4009	S100243	Front panel (Control panel)
4010	S33974	Screw M4x16 (10 pieces)
4011	S43561	Fuse (2 AT) (10 pieces)
4012	S59372	Fixing clamp
4015	S100229	Switch
5001	S62775	Heating body plate (24/28 kW)
5001	S62776	Heating body plate (30 kW)
5002	S59132	3-way valve motor
5003	S62773	Hydraulic unit (C30/39)
5003	S62774	Hydraulic unit (Right C24/28)
5004	S62772	Hydraulic unit (Left)
5006	S59133	Sensor
5007	S58730	O-ring
5008	S59131	O-ring
5009	S59135	Spring (15.2 mm) (10 pieces)
5010	S56155	Gasket (diameter 23.8x17.2x2) (20 pieces)
5011	S59578	Screw M5x8 (20 pieces)
5012	S59141	Screw M5x18 (15 pieces)
5013	S59143	Outlet filter
5014	S62722	Clip (10 pieces)
5015	S62763	Safety valve (3 bar)
5016	S62720	Feed through (diameter 46x15) (10 pieces)
5017	S58757	Spring (17 mm) (10 pieces)
5018	S62433	O-ring (diameter 16x3.6) (10 pieces)
5019	S40824	Tightening collar (22 mm) (10 pieces)
5020	S62725	Clip (25 pieces)
5021	S62730	Flat joint (27.4x18.2x2)
5022	S56157	Gasket (18.3x12.7x2) (10 pieces)
5023	S62765	Valve (diameter 22)
5024	S100234	Stop valve (1/2")
5025	S62764	Valve (diameter 15)
5026	S100244	Pipes + Seals
5027	S100233	Stop valve (7/8")
5028	S62754	By-pass
5029	S62532	Valve
5030	S37365	Tightening collar (15 mm)
5031	S46023	Nut (22 mm) (10 pieces)
5032	S58766	Nut (15 mm) (10 pieces)
5032	S62715	Flat joint (diameter 14.5x8.5x2) (10 pieces)
5033	S62781	Flowrate detector (*1))1.2 l rpm)

Rep	Code no.	Description
5034	**S100246**	Disconnector
5035	**S100232**	Gasket 8.4x5x1.6 (10 pieces)
5036	**S100231**	M10x1x5 nut (10 pieces)

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In the interest of customers, De Dietrich Thermique SAS are continuously endeavouring to make improvements in product quality. All the specifications stated in this document are therefore subject to change without notice

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De Dietrich

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